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PLAINS OF ALOTENANGO AND ESQUINTLA, BETWEEN THE VOLCANOS DE AGUA AND FUEGO.

London, Trelawney Saunders, 6 Charing Cross.

Day's sketch of the Queen

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CENTRAL AMERICA;

DESCRIBING EACH OF

THE STATES

OF

GUATEMALA, HONDURAS, SALVADOR,
NICARAGUA, AND COSTA RICA;

THEIR

NATURAL FEATURES, PRODUCTS, POPULATION, AND
REMARKABLE CAPACITY FOR COLONIZATION.

WITH THREE VIEWS.

BY

JOHN BAILY, Esq., R.M.,

Many Years Resident in the Country.

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This view was taken from a height overlooking the plains of Duēnas towards Alotenango, and the distance shews the line of coast along the Pacific Ocean. The Volcano de Agua is on the left, and its northern base approaches the Antigua, or old city of Guatemala. On the right is the Volcano de Fuego, with its two peaks appearing like two distinct mountains. These volcanoes form prominent beacons for the navigator, and their appearance is well described by Captain Basil Hall, in his Voyage of the "Conway," in 1826. (*See Hall's Voyages.*)

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This lake is surrounded by the most lovely scenery imaginable; and language fails to describe its beauties in adequate terms. The climate is so mild that the seasons may be said to have merged here into one continual spring. The view is taken from the north-western side of the lake, having the volcano of St. Pedro on the right, and the rock of Solola on the left.

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This view presents the volcano as it was seen and sketched by Mr. G. U. Skinner on the 20th June, 1838; it is in constant eruption. The lava stream varies in form, sometimes flowing in a great mass, as here represented, and at other times running down the mountain side like a rivulet of livid fire. Seldom more than ten minutes elapse between the eruptions; and their fierceness alternates with the seasons, being most severe at the commencement of the rainy season, from May to June.

- A NEW MAP OF CENTRAL AMERICA, drawn by Mr. BAILY, and engraved by TRELAWNEY SAUNDERS, is published separately, and is intended to accompany this volume. The size is 40 inches by 27; the scale about 33 miles to one inch; and the details generally are far more minute and comprehensive than those of any other map of this part of the world.

PREFATORY REMARKS.

IT is now a little more than a quarter of a century since the name of CENTRAL AMERICA has become known to Europe. It previously formed one of the sections of the vast colonial possessions of Spain upon the western continent, which were severed from that dominion by an almost simultaneous declaration of independence. The greater divisions of these immense territories—Mexico, Columbia, and Peru, had been for ages famed for the enormous metallic wealth they furnished to the mother country, but were comparatively little known as to their other resources, and remained almost a sealed book to the rest of the universe, until their revolt gave free admittance to general commerce, to travellers, speculators, and soldiers, from every other part of the world. Through these, and by the efforts of the new Governments to make their inherent wealth known, more information about the interior of the countries was obtained in a few years than had antecedently been acquired during three centuries. But Central America having effected its emancipation without recourse to a contest in arms, did not attract an influx of military adventurers; and having been less extensively described by early historians than the great vice-royalties, did not so speedily draw the attention of the scientific, the inquisitive, or the speculative, as they did;

nor indeed has it even yet been visited by travellers, of name, acquirements, and patience enough, fairly to do it justice after a careful investigation.

Nor has it remained altogether unnoticed, for in the course of twenty years there have been published "Travels," "Sketches," "Journeys," "Incidents of Travel," and "Residences" of longer or shorter duration in Central America, all perhaps readable enough, and made sufficiently agreeable to the seekers after, and devourers of, mere novelties, who care less for instruction than amusement. These works have treated upon a variety of topics in a desultory way, and in some cases, as if accuracy of examination were a troublesome process or not necessary, large drafts have been made upon fancy for filling up. Occasionally the writer, following the bias of his own mind, has been pleased with discussing systems of government suitable to a country newly released from a thralldom qualified as oppressive, without taking the pains to ascertain whether the oppression might not have been less real than imaginary; with pointing out what *ought* to have been done, and blaming all that *was* done; with foreseeing what would *fail*, and vaticinating what would not be useful; but all this without duly examining the elements that were to be wrought upon, or the means of working with them, and finding abundant fault with the little progress made in a short time, as if the incipient nation should, by some methodical management or another, have been made to run, before its legs had grown strong enough to enable it to walk. The erroneous notions of political economy which have been followed have met with

much censure : the want of talented men to guide the newly adopted system ; illiberality of opinion in those who stood most prominent ; narrow-minded prejudices in religious matters, that ought not to exist in an enlightened age ; an ignorant, and because ignorant, a presumed unusually depraved state of society, are some of the reproaches thrown out by hasty pens. To some, the low condition of agriculture and the deficiency of agricultural knowledge is a subject of complaint : this, however, is justly urged, for the fact is incontrovertible. In others, the general pettyness of commercial relations have excited a sneer of contempt, because they did not appear to warrant grand speculations in the country : this may be more or less correct, accordingly as it is viewed by prudent or adventurous individuals ; for what might be deemed safe and fairly profitable by one, would be looked at as paltry and too insignificant by another, desirous of making a dashing venture. Bad roads, and certainly this imputation is well merited, worse travelling accommodations, with the worst of all possible cookery, have put some travellers so much out of temper as to excite a condemnatory judgment against almost every thing they met with. Others, of a more light-hearted character, have found amusement from their personal adventures and little disasters on the road, or have had their courage roused by flying rumours of robbers and assassins in the dramatic style of *Fra Diavolo* ; consequently they have kindly made their readers participate in their amusement, temporary alarm, and final satisfaction at reaching the destined place in safety. From these works not much of solid or useful information can

be derived: the actual state of the country, the vast capabilities it presents; the great improvements that could be introduced, and the extent to which these might be carried; the advantages to be obtained from a soil in its nature most beautiful; a just estimate of the character of the people in all their different grades, with enlightened views as to amending their social condition, are points not developed fairly or dispassionately. What has hitherto been written about Central America tends more to vilify than elevate it in the estimation of other nations; and until an appropriate description of it be undertaken by competent writers, capable of reviewing all its merits, of judiciously directing attention to its various resources, and pointing out how these can best be made available, it will remain under the stigma thrown upon it, incautiously perhaps, rather than wilfully. When it shall receive this benefit from an impartial hand, in the spirit of candour and justice, it may then be proud of acknowledging a favour which will place the endowments it has derived from nature in a light that many regions of the globe would be desirous of enjoying.

A colony possessing great inherent capabilities, has not unfrequently had its progress retarded by a faulty system, or inefficient direction. A nation with many peculiar sources of wealth in its soil, which, if properly divulged, would open a profitable if not a brilliant career, has often received a check in its advance to prosperity, from bad government, precipitate or unsuitable legislation, and the contests and party feeling arising therefrom. Something like this has proved to be the special mis-

fortune of Central America—a misfortune if not always inseparable from, often arising out of, a change of customs long radicated by patient submission to an unquestioned authority; but this should be considered nothing more than an accidental position, a temporary evil brought about by inexperience, for which time, more or less, will produce a remedy. It has no reference to the natural riches of the soil, or the expedients for unfolding them, which may be brought into action as soon as the paralyzing causes shall have ceased; for all these remain unimpaired.

At the period when this country threw off its allegiance to Spain, many and well-founded expectations were formed that the ability of placing itself in a situation as prominent as most of the other revolted Spanish colonies on the continent would be demonstrated, if not rapidly, at all events progressively; but these hopes were destined to be frustrated, and certainly in the space of twenty-five years no real or beneficial improvement has taken place. If it be asked whence has originated this failure in bettering the social condition, there is a ready reference to one great cause of it; namely, the intestinal discords between the States, which have excited contests for supremacy, and produced resistance to the adoption of institutions that should be advantageous to all alike. By these civil wars, which, with few intervals, have extended over the period just mentioned, vast wealth has been fruitlessly wasted, or indeed worse than fruitlessly, when employed in devastating instead of regenerating: party animosity has wilfully injured or destroyed many valuable

possessions ; through fear or apathy, nothing has been restored, nothing useful undertaken. It would be extraneous to the present purpose to investigate how these evils have sprung up ; it is enough to say the melancholy effects of them are now but too substantial. Another circumstance may be assigned as being in some degree a cause of the little progress adverted to, and that is, the very scanty number of foreigners who have resorted to these parts, either for mercantile or agricultural purposes. Mexico, Columbia, Chile, and Buenos Ayres, have been more fortunate in receiving a great influx of these ; and there can be no question but that those countries have reaped great benefits from their presence, intelligence, and industry. To Central America, where the population is very small, compared to the extent of territory, the acquisition of a few thousands of the laborious families who are daily leaving all parts of Europe, would be a most favourable event, especially of the class previously familiar with, and engaged in, rural culture. By their aid, large portions of the fertile land now laying waste, or nearly so, could soon be rendered profitably productive ; thereby augmenting the general wealth of the country, giving after a short time an easy competence to the active cultivator, or to the capitalist a handsome return in proportion to his outlay. To the immigrant, whether capitalist or only with sufficient funds for sustaining himself for a limited time, there would be a wide and untried field for exertion, on a soil of conspicuous fertility, under a climate as salutary and beneficent as any of the most favoured of the globe.

The different States seem at length to have acquired, through experience and disasters—the best of all instructors, a conviction that civil broils long continued can bring forth nothing but perplexed policy in the affairs of Government, as well as misery to the people. Thence they are beginning to shew something like a willingness to promote needful reproductive improvements. If but a commencement be made of carrying such measures into effect, there will be little fear of its failing to give good results, commensurate with the efforts employed. Many, very many, things require to be done, also some to be undone, before rapid advances can be expected; there are, however, few obstacles of a magnitude to deter enterprise. If at first sight they should seem arduous to the apathetic or indifferent, they would speedily vanish before appliances judiciously selected, and put in action with energy.

With the intent of shewing that very great, almost incalculable, rewards to intelligent industry, can be wrought out from the several sections of Central America, by the application of few other than ordinary means skilfully employed, the memoranda contained in the following pages have been put together. These have been collected in different parts of the country, and at different times, during a period of more than twenty years, with as much care and attention to facts as the writer was enabled to bestow upon them, and are now used for the purpose of elucidating a new Map* of the

* A new Map of Central America, by John Baily, Esq.; engraved and published by Trelawney Saunders, 6, Charing Cross, London. 1850.

territory, which he has drawn. He believes there will be found in them a fair exposition of the actual character of the country, and the many valuable resources it is endowed with; neither tinged by false colouring, or heightened by exaggeration.

Though the description should be found defective in some, or even in many points connected with agricultural and productive projects, there is a probability that as a synopsis, until a better work by a more qualified hand shall be written, it may be the means of attracting notice and being useful at a time when large portions of the population of Europe are seeking lands in foreign climes, on which to employ their labour and moderate capital usefully to themselves; and it may be fearlessly asserted that few parts of the world can present better opportunities, or less serious obstacles to the attainment of that desire.

Guatemala, 1849.

THE STATES OF CENTRAL AMERICA.

WHEN the modern States of Central America formed a part of the vast Colonial dominions of the Crown of Spain, it was sometimes distinguished as the Kingdom, sometimes as the Captain-Generalcy, of Guatemala. The larger part of it was conquered and subjected to the Spanish monarchy by Pedro de Alvarado, in 1524 and following years, and remained an appendage of that Crown until 1821, when it threw off its allegiance. At this latter period the territory extended from the eastern part of Chiriqui, (Escudo de Veragua,) where it joined Columbia on the south-east, to the frontiers of Mexico on the north-west; being a distance overland of more than 600 leagues. For the convenience of government and administration, it was divided into provinces, varying in number at different epochs, and at the time of declaring itself independent, amounting to fifteen. In the present day, however, it does not comprehend this entire extent, because the whole of the spacious province of Chiapas, on the north-west, formerly belonging to it, has been appropriated by the Mexican Republic; and a portion of that of Veragua, on the south-east, by the Columbian Government.

In this short sketch it is not intended to examine the history of the country antecedent to the conquest, nor to go into details of its state and progress for nearly 300

years under the conquerors ; the main object in view being no more than to give a concise geographical description of it as accurately as available data will permit, and touching only on matters purely statistical, without entering into the labyrinth of political changes and dissensions, which have retarded its progress towards prosperity, in a greater degree perhaps than they have done in the other sections of Spanish America.

BOUNDARIES AND PRINCIPAL FEATURES.

Central America lies between the 8th and 17th parallels of North latitude, and 83rd and 93rd meridians of longitude West from Greenwich. It must not be understood to occupy the whole of this terrestrial parallelogram, as the coast of the Pacific Ocean stretches from south-east to north-west ; and on the Atlantic, at first from south to north nearly, and then from east to west. An idea of the nearly triangular figure thus formed may be obtained by noting on a map, that from Point Burica, the south-east extremity on the Pacific, in the 8th degree of latitude and 83rd of longitude, to Point Blanco, on the Atlantic, in the 10th degree of latitude, it is just two degrees, or 40 geographical leagues, in breadth ; from 83° 30' of longitude on the Pacific—that is, from the Gulf of Dulce to Cape Gracias a Dios, in 15° North, it is 132 leagues broad ; from Cape Blanco, at the entrance of the Gulf of Nicoya, in 9° 35' and 85° West, nearly to Cape Cameron, in 16° North, it is 128 leagues only ; from a point in the state of Salvador, in 13° 25' and 88° 35', to Cape Three Points, in the Bay of Honduras, it measures 50 leagues ; and lastly, from the Bar of Ocos, in 15° 0' and 92° 30', to 17° North, it is 40 leagues broad. It will therefore

be found to contain, in round numbers, very close upon 15,700 square geographical leagues of land, including the Mosquito shore, and the English settlement of Belize.

On the south-east the Republic is bounded by the province of Veragua, belonging to N w Granada ; on the east and north by the Caribbean Sea, the Mosquito nation, and the peninsula of Yucatan ; on the north-west by the state of Chiapas, in the Mexican Republic ; and the whole of the south coast is washed by the Pacific Ocean.

Sea Ports.

A position naturally so advantageous, being accessible from both oceans, is rendered still more favourable for the purposes of commerce, by having ports on each ; viz., on the Caribbean Sea,—Yzabal, and Santo Tomas, in the republic of Guatemala ; Omoa, and Truxillo, in Honduras ; San Juan, or Grey Town, on the Mosquito coast ; and Matina, in Costa Rica. On the Pacific side, there are Nicoya, belonging to Costa Rica ; Realejo, to Nicaragua ; La Union or Conchagua, Libertad, and Acajutla, (the port of Sonsonate,) appertaining to Salvador ; and Ystapa, to Guatemala : all these are ports of entry. Libertad, Acajutla and Ystapa, are indeed rather roadsteads than ports, affording no protection to shipping against bad weather :* yet the occurrence of this is not frequent ; and generally speaking, vessels may discharge and receive cargoes with

* Acajutla, although a roadstead, is protected by a long ledge of rocks, called “ Punta de los remedios,” which breaks the swell, and makes the landing comparatively easy, particularly at low water,—when it is quite safe, even in canoes ; but always so, by using a “ *guess warp*,” or as the Spaniards call it an “ *And  nivel*.”

little difficulty during the greater part of the year. The others are unexceptionably good. The Government of Honduras having recently opened San Lorenzo, near La Union, in the Bay of Conchagua, to the admission of imports, four out of the five states now have ports of entry on both oceans, and Salvador is the only one in which maritime intercourse is limited to the Pacific. In addition to these, Costa Rica possesses the ports of Culebra and Salinas, both good, but in a district almost uninhabitable; Nicaragua has that of San Juan del Sur—perhaps destined to become the most remarkable spot on the globe, by the opening of the inter-oceanic canal; Salvador has Jiquilisco, and Guatemala has Ocos, all on the Pacific, which, by an extension of population and agriculture, would become useful auxiliaries to the general prosperity.

Mountains.

The great chain of the Isthmus, more or less broken, intersects the country in a direction nearly parallel to its north-western coast, closer to the Pacific, for the most part, than to the Atlantic; to which, however, its lateral ranges nearly approach. The elevation of the mountains is not so great as in the more northerly or more southerly sections of the continent, yet they may fairly be characterised as lofty; for some of the most prominent points rise to nearly 14,000 feet of perpendicular height: perhaps 5,000 to 7,000 feet may be taken as the mean altitude. Upon or near to the main ridge there are several volcanic cones, two or three of them active, but the others extinct; they are peculiar to the Pacific coast, as there is not one in the interior, nor contiguous to the Atlantic shore.

As branches from the main range diverge in many directions, the superficies presents an incessant alternation of mountain and valley, so that large plains are nowhere met with. This circumstance greatly modifies the atmospheric temperature, causing such a variety of climate as to occasion the distinction of cold, temperate, and hot, which is applied in the language of the inhabitants to districts bordering upon or close to each other; and it is no uncommon occurrence to pass through each of these modifications in a distance of eight or ten leagues.

Rivers.

A surface so irregular contains a countless multitude of springs, which feed a great number of streams and rivers, affording, with rare exceptions, an abundant supply in all parts, for the purposes of irrigating and sustaining the bounteous fertility of the soil, with which the country is so generally favoured: thermal springs are everywhere numerous. None of the rivers are entitled to the denomination of large, and will not bear comparison even with those of the second order in Europe, either for length or magnitude. Nor are they much calculated to be of benefit to internal communication, without incurring an expense for their improvement, which the country now is, and probably for ages to come will be, unable to afford: two or three of them, however, may be omitted from this condemnatory clause. The principal are the following:—the Polochic, discharging itself into the Gulf of Dulce, and thence into the Bay of Honduras; Motagua; Chamelicon; Ulua; Roman; Black River, or Tinto; Wanx, reaching the sea at Cape Gracias a Dios; the Escondido, or river of Segovia, discharging into Bluefields Bay—the last two run

through a track of country not much known, and occupied by Indians of the Mosquito tribes; and the San Juan de Nicaragua, all on the Atlantic coast. Of these rivers, the last stands forth as a prominent exception to what has been said of the others, and will be spoken of hereafter. The rivers of Choluteca, and Nacaome, Lempa, Paza, and Esclavos, are the largest on the Pacific coast. All these streams, excepting the San Juan, are obstructed at the embouchure, by bars more or less formidable; the currents, owing to the sources and tributaries being in elevated regions, are mostly strong: the depth of water is very variable, but scarcely anywhere, even towards the mouths, amounting to fathoms; and all of them, if there be not falls, are occasionally embarrassed by rapids, and sometimes by both. It is *not* meant to be asserted that some of those which run through the most populous parts of the country, as the Polochic, Motagua, Ulua, or Lempa, for instance, are wholly incapable of improvement, so as to be made navigable to certain distances for suitable river craft, or even small steamers, of light draft of water, which undoubtedly would be a vast benefit to the inhabitants. But until traffic, external and internal, shall have become many times greater than it now is, there will not be an inducement sufficient to warrant the undertaking of works of a nature so costly, and the important advantages of easy water communications must lie dormant for an indefinite period.

There are several lakes in different parts of the territory; the principal ones are those of Nicaragua, and Managua, in Nicaragua; the Golfo Dulce, Peten, Atitlan, Amatitan, in Guatemala; Guija, and Ylopango, in Salvador; but only the three first-named are, or can be, rendered of use, either generally or partially.

Climate and Seasons.

Although Central America occupies nearly the middle space between the Equator and the Tropic of Cancer, consequently lying within the Torrid Zone, the temperature may be said to be relatively mild, and taken altogether, it undoubtedly is salubrious. The degree of absolute heat, from the coasts to the interior, differs considerably ; but only in a few places on the former is it found unfavourable to general health, or productive of inconvenience : in the interior it is less than on the coasts, and there it is usually moderated by the sea breeze. The want of serial observations taken in various places, prevents giving an accurate estimate of thermometrical changes. Permanent residents have shewn hitherto but little curiosity in such studies ; and casual strangers, occupied in mercantile rather than scientific pursuits, have furnished only a few transient notices, of not much aid to investigation. Therefore the only resource is, to proceed upon the scanty data that have been collected from time to time in different localities, until better can be obtained ; and these will lead to a supposition of the mean maximum heat of the interior being about 68° Fah., and of the coast 82° to 84° ; but in many places on the sea-board, the mercury for many days during the dry season ascends to 96° in the shade. This is frequently the case at Omoa, Truxillo, Sonsonate, San Miguel, Leon, and perhaps some other places similarly situated, where, from peculiarity of position, the atmospheric heat is augmented by radiation. Omoa, for example, is considered one of the hottest towns in America, north or south.

Experience shews that the places most prejudicial to health lie on the northern coast, and the Mosquito shore,

where endemic and intermittent fevers are not unfrequent. The Pacific coast is exposed to a temperature equally high, or nearly so, but is much more salubrious, and seldom visited by epidemic or contagious diseases. The year is divided into two seasons—the rainy and the dry ; the former commences about the middle of May, and continues until the middle or end of October, seldom longer ; the dry season then sets in, and lasts six or seven months, during which period no rain is to be expected, and in fact even a casual shower is rare. The quantity of rain that falls in the wet season is very great, often accompanied by violent thunder and lightning ; but the change from one season to another is not marked by hurricanes, or other elemental commotions : sometimes slight or moderately strong shocks of earthquake are felt at these periodical transitions. If the wet season begin at the regular period, and the fall of rain be not subject to other than short interruptions during the sequent months, so will the produce of agricultural labours be abundant or deficient ; for it is almost an invariable consequence, that when there happens the anomaly of rain commencing in the middle or end of April, succeeded by an interval of three or four weeks of dry weather, such a year is unfavourable to crops of all kinds ; and not less so, should it be delayed until the first or second week of June. When these irregularities take place, the harvest of maize, pulse, and other alimentary growths, is much diminished, so that the labouring population is sometimes exposed to hardship, but rather from local than from general scarcity : fortunately, however, such occurrences are not common. In a country where so many of the chief features display volcanic organization, it will not be strange to find that earthquakes have been and continue to be frequent. From the time of its discovery to the


present day, numerous convulsions have been described by historians, and commented upon with more or less exaggeration ; but as it forms no part of the purpose of this short sketch to give a description, or enter into details of such calamities, it will be sufficient to say, several terrible ones have occurred at different periods, causing great damage and disasters in some of the large towns ; nor can there be a well-grounded presumption to suppose, or hope, that future generations will be exempt from experiencing their share of similarly dreadful visitations.

Productions and Agriculture.

A soil of very great fertility, with varieties of temperature suitable to the growth of almost every vegetable product peculiar to the Tropics, and of many that are natives of the Temperate Zones, may be expected to abound in, or to be made capable of bringing forth, whatever is useful or advantageous to mankind in any way. Different cereal grains and alimentary pulse, fruits and culinary vegetables and roots, wild and tame animals of most descriptions used as food, cattle, horses and mules, are in great plenty ; so that as far as sustenance is concerned, few countries are more highly favoured with the means of providing an immense population with all the necessities, and many of the luxuries of life. For the purposes of commerce the catalogue is not less comprehensive ; and as principal articles may be enumerated indigo, cochineal, sugar, coffee, cocoa, rice, tobacco, cotton, wool, hides, many dye woods, drugs, balsam and various gums, timber, minerals, and precious metals, with a multitude of less important items, which taken altogether would be a never-failing source of competence and even wealth to

many millions of inhabitants. This is not a picture too highly coloured, yet it must not hence be inferred that the country actually is in a position to reap so great a harvest of opulence, or to enjoy all the benefits which its advantageous position and numerous capabilities would confer.

It is clear that a soil, howsoever fertile it may be, without a population adequate to its cultivation, will remain, at least the major part of it, a beautiful wilderness inviting to industry, but nearly useless without it. Nor can a scanty population, having little agricultural knowledge beyond that of committing a seed to the ground at a certain season, and gathering the fruit which nature has ripened to perfection, derive, even remotely, that amount of profit which the luxuriance of the land, if better treated, would offer to its acceptance. The fruits of the earth become abundant to man in proportion as he applies his knowledge and labour to the tillage of the ground ; but if his efforts be not guided by some acquired skill in this most important of all sciences, he will continue in the routine of his forefathers, which will ever keep him from improvement, and low in the scale of civilization, although he seldom fails to get a reward for his toil more than commensurate with the labour expended. This pertinacious adherence to antiquated practices, and the want of a moderate degree of science in rural pursuits, prove serious checks in the advance to a better state of things. Indolence, with which the people has been reproached, and it may be not altogether undeserved, causes less injury in this particular than the want of instruction ; for habituated to methods which take date from their earliest traditions, they know not that better can be introduced, nor how to get rid of the old ones. Occasionally the working classes

are capable of great exertions, are persevering and patient of fatigue, but those good qualities are not seconded by a judicious application of their physical powers. But the husbandman labouring under disadvantages still more serious, in the want of implements suitable to the prompt and easy performance of his work, is consequently but rude in his operations. The plough, the harrow, the scythe, the sickle, are not found on the farm—the hoe and the machete are the only substitutes for them; and as most of the mechanical appliances for diminishing manual labour, and promoting good husbandry, are unknown, they cannot be appreciated, therefore they are not sought for. It may not be quite correct to say the plough and its uses are wholly unknown; in name indeed it is not, but the practical effect of so powerful an instrument, and the immense benefit derived from the skilful employment of it, are not well understood. The implement which goes by this name is formed from the branch of a tree of hardwood, curved at nearly right angles, as in () this figure; the extreme point of the lower limb being shod on the under part with a flat strong piece of iron, about nine inches long by four broad; to the upright limb is fitted a beam which projects forward to a sufficient length for a couple of oxen to be yoked to it; the ploughman guides it with one hand, and with the other directs the cattle in as straight a line as he can, by thongs affixed to their horns. This primitive contrivance tears up the surface of the ground rather than forms a shallow furrow; yet so rude an expedient is not without a serviceable effect upon a rich and fertile soil: the employment of it is, however, but limited, the hoe and the machete being more constantly used in field work. The management of the dairy is carried on with no better order; hence

the produce of it is neither so great as it ought to be, nor is the quality so good as it could easily be made ; while great waste is caused by bad arrangement and deficiency of suitable utensils.

Available methods of irrigation, which during the dry season would prove of immense benefit, are seldom resorted to ; nor are attempts to reclaim or improve wet lands by an appropriate system of drainage ever made, even where easily applicable. The neglect of this on the part of proprietors arises, less perhaps from not perceiving the ultimate good which would thence accrue, than from an unwillingness to venture upon the outlay of capital, the return for which is to be looked for in the cumulating increase of a series of years, instead of coming back with a tangible percentage in the same year : the gradual gain from thus laying money out to interest has certainly not been thought upon with so much reflection as the subject merits.

If during a long series of years the practice of agriculture has received no improvement, it may be safely asserted that the study of this most essential art has not yet been introduced into the country ; nor does it seem to be thought possible that a given space of ground can, by having recourse to a judicious system of culture, widely differing from the one hitherto practised, be made to produce double or treble the amount it has done by the method heretofore adopted. Experience has proved in other countries that this can be done, and unquestionably similar procedures in this country would not be attended with different results. Such an amelioration can never take place by adhering to old habits, nor can progress in a better direction be looked for, until some men with reformed ideas, with competent means for trying experiments, and repeating processes which have been

successful in other regions, shall have acquired practically knowledge for themselves, and be willing to impart it, by example and instruction, to the humble and less favoured classes of their fellow-countrymen.

Another great advantage derivable from improved systems of culture is economy in labour, consequently in expenses ; which, in a district thinly populated, demands serious consideration. For example :—If 20 measures of land have the fruitful qualities so raised by superior tillage, and other auxiliary means, as to yield as much as twice or three times the extent abandoned to ignorant husbandry, the saving will be evident. For the cost of seed and working the larger space, compared with that of the smaller, will be as two or three to one ; while the produce will not be more, if indeed so much as from the smaller ; and it is by experiments of this description that the cultivator will be enabled to economize his resources and direct his calculation, not to how great, but to how small a quantity of land he may apply them to secure a given result.

Combinations of knowledge with economy in what relates to predial occupations, have not yet migrated to Central America ; and proprietors have been contented to accept what the unaided fertility of the soil annually bestows upon them,—which being bountiful, little desire of increasing it is manifested. Hence arises the anomaly that where many staple commodities could be abundantly raised, only three or four make up the general export of the country ; while others which would always find an equally ready mart, are grown but in sufficient quantity to supply home consumption. *Sugar* is easily cultivated in all the States by free labour ; but there is no surplus, or only a very small one, for exportation. *Tobacco*, ex-

cellent in quality, and grown in each State—a branch of industry capable of great extension, is only attended to so far as to supply the home demand. *Coffee* of a superior class grows well in every part of the territory, but with one exception (Costa Rica) very little is sent to a foreign market; and as the use of this article is not yet generalised among the inhabitants, only a comparatively small benefit is derived from a branch of commerce which could easily be augmented a thousandfold. *Cocoa*, and that of Soconusco is esteemed the best known, formerly cultivated to a great extent for home use as well as exportation, is now sadly neglected; and notwithstanding *chocolate* is used by people of almost every class, from one extremity of the country to the other, ensuring always a great consumption, the cocoa from which it is made is not now produced in sufficient quantity to equal this demand; and instead of there being a surplus of the native article of a superior quality, the deficit is made up by importing a very inferior one from Guayaquil. *Cotton*, of which the quantity required for the fabrics of Europe is so immense, and the demand increasing, could be raised, of very good and useful kinds, that would afford a fair profit if despatched to a foreign market; but the cultivation of this article is limited to the small portion which is worked up in a few coarse cloths of domestic manufacture.* *Jerga*, a species of woollen texture much used by the working-people for clothing, is made in great quantity from native wool; and were more attention given to the breed of sheep, increasing the numbers and improving the

* The cotton grown in Nicaragua has a high standard already in the Manchester market, and offers a splendid speculation to agriculturists, if a port of export on the north coast be established.

fleece, there would be in a few years a large supply beyond what could be employed at home ; consequently, an exportable material of no mean value might be added to the amount of farming profits.

Many other things of minor importance, either collected in their natural state, or raised by culture, can be enumerated ; such as *medicinal plants, gums, dye stuffs, &c.*, which would form an aggregate value far from contemptible, but are now almost neglected or entirely overlooked. The *mineral wealth* of the country is unquestionably important, for besides the precious metals, copper, lead, and iron is found ; but none of these are extracted, except small quantities of the former, very inconsiderable if compared with those formerly obtained. *The produce of the forest*, long looked upon with indifference, is at length beginning to be turned to account ; and in the States of Guatemala and Honduras, on the banks of the larger rivers running into the Caribbean Sea, which afford facilities for rafting, timber, chiefly mahogany, is cut for exportation. The trees are sold as they stand, at a certain price each, to foreign speculators, who fell and transport them to the points of embarkation at their own charge. The privilege of cutting is obtained from Government in the case of "*tierras valdias*," (unappropriated lands,) and from the proprietors, if the lands belong to individuals ; so that some profit is now derived from the soil which for ages yielded none ; and in the wilderness, which spontaneously produced riches only to bury them again by natural decay, a road to gain is opened.

Not the possibility alone, but the ease with which branches of industry entirely new to the country can be introduced, by selecting for experiment such as may be thought suitable to the climate and soil, will be shewn by

mentioning a trial that proved so encouraging in one instance as to be worthy of imitation in others. In the year 1839, a gentleman, native of Guatemala, who had resided some years in the United States, returning to his own country brought with him half a dozen cuttings of the *morus multicaulis*, which he believed could, with proper care, be naturalised in various districts of the different States of Central America, and be the means of giving an impetus to the cultivation of silk. His expectations were not disappointed, for both soil and temperature proved so congenial to the propagation of the mulberry, that in a time almost incredibly short, many hundreds of thousands of plants were raised and brought into a flourishing condition. Subsequently silkworms were reared, and silk produced in quantity sufficient to send a portion of it to Europe, for the purpose of having its quality tested, which proved equal to some of the best classes imported from China: the specimen sent was manufactured into articles for use, thus authorising very sanguine hopes of future profit. To encourage an effort opening such a prospect of advantage as would be within reach of even the poorer part of the community, the Government of Guatemala offered prizes, gold medals, to such persons as should raise a specified quantity of silk, of a merchantable quality, within a given time.

Excited by this honorary stimulus, medals were gained by three individuals, who conjointly exhibited nearly 700 lbs. weight of their own growth.

At first entering upon this new pursuit, there was no practical knowledge, either of the mode of procedure in cultivating the plant, or of managing the worms, or of the various manipulations requisite for bringing the filament into a proper state for manufacture; all had to be dis-

covered from books, or supplied by native ingenuity, and for a time all went on in a way decidedly prosperous. But as theoretical instruction, how good soever it may be, is not always sufficient to meet fortuitous cases, the experimentalists found themselves, after a season or two, thwarted by casualties which, as they could not be anticipated, so when they did occur, no method of counter-acting them could be devised. Some atmospheric cause, some precautions omitted, or some faulty mode of treatment, originated a distemper among the insects that in a short time destroyed millions of them. A preservative against the recurrence of similar losses has now to be sought for, and no doubt will soon be discovered ; but by an accident so disheartening, the spirit of enterprise, though not diminished, has received a check that keeps the business in a languishing state, and perhaps will continue to do so until a greater share of intelligence in remedial expedients shall have been acquired. Means are in progress for bringing from those parts of Europe where silk is cultivated in the most skilful manner, some families of persons bred up in the employment, by whose aid it is hoped to supply the experience and practical ability that is yet wanting ; and to demonstrate further, by facts incontrovertible, the facility of prosperously carrying on an art that will extend its benefit to a large number of individuals, in proportion as it increases the commercial resources of the country. Should these endeavours be worked out, with a determination to accomplish them commensurate with the importance of the object in view, there can be no reason to suppose, after the strong evidence, in fact positive proof furnished by the trial already made, that complete success may not be confidently calculated upon. To the preceding, another

remark may be added, namely, that in this favourably temperate climate the *morus multicaulis* throws out its leaves all the year without interruption ; and as a consequence of this continual vegetation, the breeding of the silkworms is not checked in any one of the months by the want of their proper sustenance. This is a peculiarity of immense advantage, which made use of with discernment, will be of the greatest utility ; because, without increased expense in the care of the plantations, the leaves for feeding the insects are furnished in unabated quantities all the year round.

Of the articles which furnish the exportable wealth of Central America, indigo of Salvador, and cochineal of Guatemala, hold the prominent place ; coffee is but just coming into the list, and every year is becoming of increasing consequence ; a little sugar ; hides, not in great numbers ; Nicaragua wood, with some balsam, sarsaparilla, and a few other things of which the sum does not add much to the total amount. The three first-named are indeed important, as the value of them ascends to a high figure, though of indigo perhaps there is not now sent out, one year with another, above one-half the quantity that was exported when the country was a Spanish colony ; but these three articles only partially represent its resources, which if properly developed in other three branches, sugar, tobacco, and cotton, would in a few years make the exports threefold what they now are. Before so desirable a change can take place, great internal improvements, political as well as industrial, must be made. Peace must be established throughout the land, and assiduously guarded by a Government competent to ensure the continuance of it. Public credit and foreign relations must be placed on the basis of respectability. Better

communications, and more speedy as well as cheaper modes of conveyance to the ports, and remote parts of the interior, must be formed ; and in aid of all these, much of the gross ignorance and rude habits of the people, that is of the greater part of the mass, must be supplanted by at least so much of intellectual instruction as will make them understand that their actual condition is susceptible of great amendment. Undoubtedly it will require much time to accomplish reforms like these, and to raise up superior minds to direct them. But this should furnish no argument for withholding the attempt, which, if once commenced, the progress, though slow at first, would be gradual ; and so soon as improvement should become palpable, it would then proceed in an increasing ratio among a race of men, by nature of a tranquil disposition, patient, and far from unteachable. A reformer, in the best meaning of the word, conscientiously desirous of promoting his country's good, need desire no better materials to work upon.

Roads.

The state of the public routes leading to the ports and principal marts, or the interior districts of a country, indicates more forcibly than is generally supposed, the character of the inhabitants, and contributes to, or retards in many ways, their well-being and prosperity. A truth so evident as this needs no demonstration, nor is argument required to prove that a people is rather in the rearward of civilization, whose means and appliances have not been effectively employed for insuring a convenient interchange of commodities ; by which the superabundance of one section is made to minister to the wants of another.

When intercourse is not easy, improvement must be slow, in proportion to the difficulties of transit; for the useful arts do not migrate from place to place until a path tolerably commodious be opened to them. In devising means to encourage this social exchange, Central America, colonial or independent, has not been successful, or rather be it said, has been negligent. In a country much broken up and intersected by elevated ridges, the lines of access between one part and another will naturally be troublesome and circuitous. Therefore they demand the industry of man to remove impediments, partially at least, if not entirely; and unfortunately, in the lapse of nearly three hundred years, very little has been done in this department of public utility. The state of the roads in an extent of territory great or small, will furnish an unequivocal rule to judge of the efficiency of the administration, both general and municipal: it will shew whether the inhabitants have a just perception of what would be useful to themselves, increase the value of their possessions, extend internal traffic, or augment foreign commerce where seaports are not wanting; and if this test be applied to the country now under consideration, it will be seen labouring under very serious disadvantages, though possibly not greater than some other sections of Spanish America.

Throughout the whole length and breadth of Central America the lines of communication in all directions are but tracks more or less trodden and worn by continual use; irregular in direction, as traced by men and animals making their way as they meet with fewest obstructions; continually made worse by the effects of weather, and violent tropical rains: art has had no share in forming them, nor has industry contributed anything to their repair. Transit is therefore difficult and fatiguing to travellers;

the conveyance of foreign goods and home produce is laborious, dilatory, and expensive; no species of wheel carriage can be used, and the only applicable mode of transport is that of mules, or the backs of Indians for articles of moderate weight. The sketch of a short journey will best exemplify the mode of travelling, which being identical at all seasons, varying only as to distance and time employed, will be a description applicable to all parts of the country. Mules are always found preferable to horses, especially on long journeys; for besides being more sure-footed on rough or steep ground, they bear heat and fatigue much better.

Suppose a person disembarked at a port, for instance Yzabal, in the Gulf of Dulce, on the northern coast, and wishing to go to the city of Guatemala, taking no more than his necessary equipage, say an ordinary trunk, perhaps two, with his sleeping apparatus, which is indispensable, at least a hammock and covering. He is without a servant, the distance is a little more than fifty leagues. He must have two mules, one for himself, the other for his effects; if he engage a man as guide and travelling attendant, which he cannot well do without, a third mule will be necessary; for each of these the charge will be about 14 dollars; his attendant another 14; to this will be added the daily expenses of living, for himself and retinue, with provender for the beasts, which the traveller usually pays; amounting together to about two dollars a day. On landing at Yzabal he will by chance find there a muleteer returning to the capital, who will engage to convey him. In that case he may be able to start on the following morning, otherwise he must wait one, two, or even three days before mules are procured. He sets out, and will be a week in completing the journey, if the weather be fine:

in the rainy season it may occupy him ten days. In his progress he need not be very curious in his enquiries for the best hostelry, for he will meet with no inn at all ; but as this is a much frequented road, there are numerous stopping places, where shelter and such accommodation as they can afford for passing the night, will be at his service, for a trifling gratuity. If he be of so cheerful a disposition as to think everything good where there is no choice, he may be able to reach his destination in good temper ; but should the peculiarities of his European habits predominate, it is not improbable that he will arrive at his journey's end in ill humour. On his route the only towns he passes through are Gualan, Zacapa, and Chimalapa, each of which is as little calculated to heighten the pleasures of travelling as to alleviate the inconveniences. This line of road is more passed over by foreigners than any other in the country ; and from its peculiar character, as well as the few signs of culture which come under notice, does not leave a favourable impression upon the mind of the passenger. In other directions the scenes presented to the eye are more agreeable, more grand, sometimes picturesque ; the objects of industry appear of more value, and indicative of greater agricultural skill : he therefore meets with a greater variety to please the eye and relieve weariness. But to what part soever he may bend his course, his progress will be marked by a similar want of public accommodation, and he must undergo similar privations, unless he decide upon taking with him all he may judge requisite beyond bare necessities ; and this will cause him an increase of expense, more trouble, and probably many more vexations.

A heavy charge is thrown upon agricultural and commercial enterprise, (which consequently causes increased

prices on all commodities,) by the slow, laborious, and expensive mode of transporting produce and merchandise. As respects imports and exports, the same journey from Yzabal to Guatemala will afford a proof of this. Imported goods are generally landed in packages so made up that a mule can carry two or three of them, provided the total weight do not exceed 300 lbs.; the export produce, which from Guatemala is chiefly if not solely cochineal, is packed in seroons of 150 lbs. net each; of these, two make a mule's load, but it must be a strong and good beast that can work steadily day after day under such a burthen. The price paid for conveyance, when very low, is at the rate of one dollar the arroba of 25 lbs.; but it varies according to the abundance or scarcity of cattle, or other circumstances, to a dollar and a half, two dollars, and sometimes even more per arroba; a dollar and a half may be taken as a medium charge, at which rate the carriage of one seroon costs nine dollars, that is to say, more than four times the sea freight of it to Europe; and upon imported merchandise the proportion will be from six to eight times the amount of freight from Europe. The time employed in this slow method of transport must always be viewed as a great hindrance to business, for mules do not generally travel more than about four leagues a day in *atajos*, or droves of 20 to 30 with their loads, nor this every day consecutively; allowing, therefore, the necessary intermissions for rest, the journey is seldom performed in less than three weeks, often it is longer, occasionally even two months. Hence it will be seen that commerce is subjected to heavy imposts, owing to the want of even moderately good roads between the ports and the capitals. In all the States this proportion may be taken as nearly an average one, differing in

degree only according to respective distances. In general practice it will be found to vary but little from one real per quintal per league : no account is here taken of loss or damage, because the conductors are held responsible for such contingencies ; yet they cannot always be avoided. If these charges press heavily upon direct commerce between the ports and the capitals, it will be evident that interior traffic, as well as the transport of supplies of the prime necessities of life from place to place, must be burdened with a similar tax, and the price of every article of consumption proportionately enhanced.

Roads, as creating intercourse and powerfully aiding in the civilization of the human family, are of such vast importance, that in almost every country legislatures have assumed it to be a duty of the highest consequence to promote the formation of them, and to enact laws for their preservation. But in this land, unfortunately, legislators have not yet turned their attention, in a serious and effective manner, to provide for the wants of the community in this branch of public policy, upon which the general prosperity so much depends. Without the interference of a Supreme Authority, and the powerful co-operation of law, improvement, so urgently and imperatively called for, is not to be expected within a moderate or a calculable period. Indeed, where so much is required to be done, it is not an easy matter to decide how to begin the work ; and where means are deficient, the case is almost hopeless. Those who are, or suppose themselves to be, the guides and rulers of a people's destinies, cannot escape the reproaches of the present or coming ages, for their supineness and neglect, in not attempting to devise means for removing a great evil, of which the paralysing effects are so obvious. A careful examination of the

proceedings of other countries in similar cases, would shew, by numerous examples, how serious difficulties have been got rid of, and excite a spirit of exertion, even did not the grievous necessities of their own loudly call upon them for it. By consulting the acts of different legislatures in the United States, for instance, it would be seen what amazing efforts have been there made in opening roads through forests, carrying them over, or where more convenient, round mountains, and thus subduing a wild territory to the uses and accommodation of society. Then would naturally follow an enquiry into the consequences that have grown out of enactments so prudent, and exertions so well directed. To satisfy this, statistics are at hand, which demonstrate what immense benefits have already resulted, and continue to flow from that source of prosperity, increasing the general wealth in progressive ratio. It may then be asked, Would not similar effects be produced by the same causes acting in this section of the continent? Supposing them to operate with equal energy, it would be illogical not to answer in the affirmative; but unfortunately the postulate will remain rather defective, as it cannot be assisted by parallel comparisons to sustain it to the full extent required by the question, because the genius, character, and population of the two countries are essentially distinct. The one inhabiting a northern climate is numerous, hardy, robust, full of energy and animal spirits; of untiring industry; capable of undertaking great enterprises with a perseverance that commands success; and with such endowments it rarely fails in attaining its object. The other, placed within the Tropics, living in a benignant climate, on a soil of unlimited fertility, that with the smallest exertion will give them all the necessities of life

in abundance ; ignorant of, and unambitious of obtaining, exotic luxuries ; few in number, of a wild character, with no great share of corporal or mental forces ; not well instructed in the useful arts ; uneducated, from having been subject for ages to the dominion of a power, which in its system of government looked more to the interest of the Crown, than to the well-being of the subject. A race living for centuries in patient subjection, without being encouraged to unfold and bring into action the best faculties of their nature, became almost indifferent to bettering its social condition ; such, with some exceptions, was the mass of the people of Central America, so long as they were vassals of the monarch of Spain. The transition from a state of colonial pupillage, or rather neglect, to that of an independent nation, has not yet been signalised by many of the advantages that so important an event ought to, and doubtless ultimately will produce ; for it must be admitted that the progress towards securing them has been retarded by the inexperience and anomalous character of the Authorities chosen as substitutes for that of the mother country. A quarter of a century has passed away in contests fruitful only in destruction, without a system of government suitable to the character and wants of the people having been devised ; and until a work so indispensable shall be consummated, the advance towards prosperity must necessarily be slow, uncertain, and perhaps exposed to further tempests and disasters. If this description be not an erroneous representation of the genius and capacities of of the two countries, it will be seen, that at the commencement of independence in each, they were by no means placed under parallel circumstances ; they had, indeed, a common base to work upon, but the one

possessing intelligence to discover quickly its natural resources, with determination to make them available for the common good, has rushed forward in its career with gigantic strides ; while the other, entering upon its new state of being with a less firm and decisive step, and less energy to guide it, has not yet been able to surmount its first difficulties ; and will therefore be forced to creep on by slow degrees in the path of improvement, until time and better administration shall enable it to throw impediments out of the way, and assume a bolder movement in the march of regeneration.

In all countries imposts are levied upon the people for the support of Government, which, in return for the funds so exacted, is most imperatively bound to watch over, not the defence alone, but the welfare of the community ; and no system of administration will ever be considered efficient, or suitable to the wants of a country, that neglects the latter part of this essential duty, which the subject is entitled to demand as compensation for the sacrifices he is called upon and forced to make. He has a claim to insist that the ruling authority shall provide for him all reasonable conveniences for the free exercise of his industry, and the facility of disposing of the produce of his labour to the greatest advantage. This benefit, so indubitably his right, will be secured to him chiefly by the means of good, or even moderately good roads, which are requisite in all parts, but most especially so along the principal lines of communication ; and until a Government shall put measures in train to ensure him these important requisites, it proves itself incompetent to discharge the duties it owes to the country. It is not asserting too much, to say that the principal check to the progression of Central America has arisen mainly from faulty

administration on a point so vital to the public interest. There may undoubtedly be some difficulty in reforming the present roads, but they are only such as time and perseverance would remove ; therefore, the work ought to be entered upon with spirit, and without delay : letting them remain as they now are, indicates inexcusable apathy, and ignorance, or neglect of the first principles of political economy, in those whose obligation it is to lay open the springs whence wealth and national prosperity would flow. If a fifth part of the immense sums which have been lavished in the unnatural and ruinous contests between one State and another, (external enemy, there has been none to contend against,) had been applied to so useful and salutary a purpose, the Republic would now stand in a position eminently flourishing.

Population.

It will not be possible to speak on this subject in a manner so satisfactory as is desirable, for there are many reasons to prevent coming at conclusions, even within a moderate degree of accuracy. In countries where partial statistical tables are formed and continued regularly, it is found to be extremely difficult to obtain a correct census of the inhabitants, and ascertain the progressive rates of population ; and much more so is it in this where no such aids to calculation exist. Registers of births and deaths are indeed kept in the different curacies, with more or less care ; but these have not been collected and formed into general tables, so that the means for compiling this useful portion of political economy are wanting ; and without them supposition must be exposed to great errors. In the year 1778 a census was

taken in consequence of a Royal Order sent from Spain, which gave to the Captain-Generalcy of Guatemala, then including the diocese of Chiapa, now belonging to Mexico, the number of 805,339 inhabitants; but this at the time was believed to err in deficiency, because the Indians, forming a large portion of the whole, apprehending an increase of the customary tribute levied upon them, withdrew for a while from their usual habitations, or by other means endeavoured to evade the numbering. By consulting the Tables of Population, made by order of the Bishops of the three dioceses that made up the kingdom of Guatemala, as they are given in Juarros' "History of Guatemala," it will be seen—

The Archbishopric of Guatemala, embracing the present States of Guatemala and Salvador, contained	}	540,508
The Diocese of Comayagua, now State of Hon- duras	}	88,143
The Diocese of Nicaragua, including the State of Costa Rica	}	131,932
		<hr/>
		760,583
		<hr/>

Or, by allowing for some discrepancies 736,086

which is the nearest approach to an accurate number for that period. Since then, up to the present time, sixty-six years have elapsed; during which there has, of course, been a natural increase, and to estimate it, recourse must be had to the equivocal method of supposition, or to comparison, which is but little better, when credible data are not to be had. Subsequently to 1778, no measures for obtaining another census were taken by the Spanish Authorities; nor from the date of the declaration of the

Independence have effective endeavours been made by the Governments of the States to repair this omission, and fix in a formal manner the amount of population in their respective territories.

Central America in many respects may be compared to Mexico ; in such, for instance, as variety of climate, mountainous character of the country, mixture of castes, manners, customs, disposition and occupations of the people, and the means of subsistence. Now if Mexico can furnish a plausible basis for estimating the increase of its population ; by analogy, an experiment may be tried to deduce thence what has been the probable increment in Central America. The Baron de Humboldt, in 1803, having before him a great number of returns of the numbers, classes, marriages, births, and deaths from different Intendencies in that country, investigated them with his accustomed critical discernment, and came to the conclusion that the births were as 1 to 17, and the deaths as 1 to 30, of the whole population ; whence he considered the number of inhabitants would be doubled in about forty years, supposing the progression to be unchecked by epidemic diseases, or other contingencies. Adopting this computation as a guide, the numbers of the census in Central America, ought to have augmented in sixty-six years to about 2,429,000 ; thus giving to the

Archbishopric of Guatemala	1,702,800
The Diocese of Nicaragua and Costa Rica . .	435,375
The Diocese of Comayagua	290,868
	<hr/>
	2,429,043
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Many circumstances induce a belief of these numbers being an exaggeration ; nor are there sufficient motives

to think that the increase can have progressed in this proportion, for by a census taken by the Bishop of Comayagua of his peculiar diocese in 1791, there appeared to be only 93,500, which in 53 years, to the present date, would give 224,000 instead of 290,000. The preceding numbers then seem to require a considerable reduction, and to make this within the limits, an attempt may be made from the following data. By a recent estimation made in the State of Salvador, and supposed not to vary much from the truth, the number is stated to be 280,000; and by another in Costa Rica, also deemed to be equally trustworthy, there is presumed to be 95,000; and there are some grounds for thinking neither of these can be very erroneous in excess or diminution: therefore, assuming the proportion of three-sevenths of 2,429,043 to be a warrantable abatement, the account for each of the five States would stand as follows:—

Guatemala	600,000
Salvador	280,000
Honduras	236,000
Nicaragua	226,000
Costa Rica	95,000
	<hr/>
	1,437,000
	<hr/>

Perhaps this enumeration will not greatly offend against probability, especially if allowance be made for casual epidemics that have occurred since 1778, as measles, small-pox, cholera, &c. Some diminution must also be assigned to loss by war, with which the States have been almost continually harassed for more than twenty years: by the *Official Returns* about 8,000 may be attributed to this cause, which is undoubtedly much

below the true figure. To venture upon calculation without the aid of its proper elements, is an unpleasing task, being one in which errors will be unavoidable, after all necessary allowances are made ; and only a limited confidence ought to be placed in the above result. A great defect in the census before cited, is the neglect of distinguishing the different castes, for as all are ranged under the head of parishioners, (*Felegreses*,) there are no means of discovering the numbers of whites, mestizoes, and Indians : the first of these must be greatly inferior to the other two classes.

Division of States.

The Republic of Central America, as established by the Declaration of Independence, formed a Federal Union of five States, each having an Executive Government, a Legislative Assembly, elected periodically, and a Constitution peculiar to itself, for its internal management. Until 1839 the nation was represented by a President, a Senate, and Federal Congress ; a change was then supposed necessary, and each State declared itself sovereign and independent of the others, so that the Union was virtually dissolved. Subsequently there has been no national Government.

Adhering to the intention expressed at the commencement of this paper, of not touching upon matters of political administration, a concise description of Guatemala, Salvador, Honduras, Nicaragua, and Costa Rica, may be proceeded with.

GUATEMALA

is bounded on the north-west by Chiapa ; on the north by Yucatan, both belonging to the Mexican territory ; on the east by Honduras ; on the south-east by Salvador ; and on the north-west by the Pacific Ocean. In superficial extent it contains about 4,420 square geographical leagues, of 20 to a degree. The greatest length on the side of the Ocean is about 80 leagues, and the greatest breadth from south to north about 60 leagues, forming nearly a quadrangular figure, slightly irregular. The district of Soconusco was severed from it a few years, since by the Mexican Government, as Guatemala insists, upon no other nor better title than that which the strong sometimes sets up against the weak. The population, from what has been previously inferred, may be taken at 600,000, which, after all allowances made, is probably rather too high, giving 136 inhabitants to a square league. All the surface is mountainous. The main chain, running in a line, nearly north-west and south-east, at no great distance from the Pacific, sends off several branches in directions towards the Atlantic, forming numerous valleys, but enclosing few plains of much extent. Along the principal range, or nearly connected with it, there are some remarkable summits of great elevation, termed generally, in the language of the country, volcanoes ; two of which, the volcan de Fuego and that of Atitlan, give occasional signs of activity : but all, whether considered active or extinct, are situated near the Pacific Sea, no one of a truly volcanic character being found in the interior. The whole State is well watered by an immense number of streams in all directions ; among these the largest are

the Motagua, the Polochic, and the Lacantun. The Motagua rises in the mountains of the department of Solola, not far from the town of Sacualpa, about $15\frac{1}{2}^{\circ}$ of North latitude, and 91° of West longitude, from Greenwich; the course of it is about south-east for 10 or 12 leagues; then from west to east, about 40 leagues; and finally, north-east for 15 leagues, when it discharges into the Bay of Honduras, near the western limit of the State of Honduras. The mouth is obstructed by a dangerous bar; but within a few years past it has been gradually making a new channel for itself in the lower part, and now forms a junction with the river Cuyamel, sometimes called the Tinto, which falls into the sea a few miles eastward of the former mouth. This change may ultimately prove of some advantage, should it ever be determined to improve the navigation of the river; for although the mouth of the Cuyamel is also crossed by a bar, yet there is always 10 feet of water upon it; a depth much greater than that on the bar of the Motagua. On the right hand it receives several tributary streams, some of considerable size, as the Piscaya, the river of Sacatepeques, the Platanos, the river of Chiquimula, which joins it not far from the town of Zacapa, besides some others of less note: on the left hand, the tributaries are few and insignificant. During the rainy season the Motagua carries a great volume of water to the sea, but in the dry months it may be forded in almost every part that is 15 or 20 leagues above the mouth; from Gualan downwards, it runs through lands almost uninhabited, for a distance of nearly 30 leagues to the sea, and in this space is navigable for small decked boats.

The Polochic has its source in the department of Vera Paz, near the village of Taçtic, in $13^{\circ} 35'$ North, and

90° 30' West : at first it takes a course to the westward for six or seven leagues, then changing to the north-east, passes near the towns of Coban and Cajabon, (the latter in 16° North, and 90° 30' West,) a distance of 16 leagues ; then turning nearly south 12 or 14 leagues, it takes a course from west to east for 13 leagues, and enters into the Gulf of Dulce. A branch of the Polochic runs from east to west, by the places named Chamequin, and Purulá, by which boats may ascend from Yzabal to a station called the embarcadero, distant a little more than 30 leagues from the city of Guatemala. The depth of water is generally five to six feet, the current strong, rendering the ascent laborious ; on each side the bank is thickly wooded, and very sparingly inhabited : at the junction with the lake, some islands, and a bar have been formed, which in the dry season oppose some little difficulty to a passage. These are the only rivers capable of being turned to account for the transport of goods ; for at some expense they could be made navigable for small steamers. Were such an enterprise undertaken, assisted by an improvement of the roads, it would be a most important benefit to the State, and especially to the commerce of the city, by reducing the enormous charges now paid for carriage.

The Lacantun is another large river, partly within the State, and partly in Yucatan ; it rises in 15° 25' North, and about 92° West ; flowing at first from west to east for 20 leagues, when it is joined by a branch coming from the vicinity of Salama ; that is, from east to west nearly a similar distance. After this junction, it runs to the northward eight or nine leagues ; then inclining N.N.W., it continues another 20 leagues, when it receives the large stream called La Passion, coming from the eastward

with a very sinuous course of more than 40 leagues : about 25 leagues further on it meets the Usumasinta, and thus combined, it flows on under the latter name, a further distance of nearly 70 leagues, to the Gulf of Mexico, at Lake Terminos. The part of this river within the State is very little known, as it passes through a country thinly peopled in the first portion of its course, and afterwards through lands occupied by tribes of the Maya Indians, an uncivilised race that avoid intercourse with others. On the Pacific side a great number of streams descend from the westerly slope of the Cordillera, but none of them require particular notice, excepting the Paza, and this only as being the south-easterly boundary between Guatemala and the State of Salvador.

There are four rather capacious lakes in the States ; of these the Gulf of Dulce is the most interesting, as the principal part of the foreign trade is carried on by its means. It communicates with the Atlantic by a smaller one called the Golfete, and the river Dulce, that together are seven or eight leagues in length. The gulf itself is 10 to 12 leagues long, and from three to four broad ; at 300 or 400 yards from the shores there are three fathoms of water, and in most other parts, from five to ten fathoms ; in the Golfete and the Dulce the soundings are not under two and a half fathoms generally ; in some parts the depth is greater, but near the mouth of the river there is a bar that impedes the entrance of vessels drawing more than six or six and a half feet water. This bank is not of great breadth, and being formed chiefly by mud brought down by the river, and shells, there could be no great difficulty in opening and keeping clear a channel through it, sufficient to permit vessels of 200 or 300 tons burthen to ascend and anchor off the little town of

Yzabal, where the Custom House is placed. Near the mouth of the river Dulce is the port of Santo Tomas, unexceptionable in all respects, being well protected against the violence of winds, and having deep water close in shore. Were a short canal made from the port to the river Motagua, the dangers of the bar at the mouth of this would be avoided, and a water communication of more than 30 leagues into the interior, could be opened to steamers or other boats: the advantages which would arise from this are obvious. Or if a road were made from Santo Tomas to meet the Motagua, at a place called the Encuentros, some 20 or 22 leagues above its mouth, many of the existing inconveniences to commerce would be removed: the construction of a good road would be rather expensive, but there are no serious natural obstacles to prevent its being done. One or the other of these operations is in contemplation, but scarcity of funds being the great impediment to improvement, it may be long before either of them can be effected. Were the present resources of the country to be supposed stationary, and affording no hopes of increment, then indeed there would be little inducement to undertake works of this nature. But such an idea would be erroneous, for they are not confined to narrow limits, and if carefully brought into action, would have little to wish for; therefore Central America, in common with other nations, is entitled to look forward with well-founded confidence to a greater share of prosperity than is now its lot, because it possesses such ample means for ensuring it.

The Lake of Peten in the department of Vera Paz, spoken of by the early historians as Peten Itza, is eight or ten leagues long, by three in the broadest part; the present town of Flores stands on an island nearly in the middle of

it. Being at the northern extremity of the State, near the territory of Yucatan, in a country scantily peopled by Indians, little is known about it; for the few travellers who have occasionally passed over this wild track to the English settlement of Belize, have given little more than vague information of the lake, or the country journeyed over.

The Lake of Atitlan in the department of Solola, five or six leagues in length, with something more than half as much in breadth, is remarkable only as being of very great depth, (it is said 300 fathoms have not found the bottom,) and receiving the waters from a large number of streams, without having any visible discharge for them; environed by lofty mountains, of which the volcanos of Atitlan are insignificant specimens. It is frequently agitated by violent squalls of wind, which endanger the passage of the Indians from place to place in their frail canoes.

The Lake of Amatitan in the department of Guatemala, nearly five leagues from the capital, is three leagues long and nearly one broad, with a great depth of water. It is admired chiefly as a bathing-place, to which, in the months of February, March, and April, the inhabitants of the city and adjacent places resort; some in search of health, others for amusement. It abounds with fish, moharras, pepescas, and crawfish, that are esteemed delicacies; they are caught in great quantities, giving a considerable profit, principally by supplying the city, during the whole year; they furnish almost the only food of the fish kind the inhabitants are acquainted with, as sea fish seldom reaches them in good condition. Near the lake there are several mineral and hot springs, said to have curative qualities for rheumatic and many other complaints. The river Michatoyat flows from this lake,

which, after being increased by several other streams, reaches the Pacific at the port of Ystapa. It is not navigable even for canoes, nor could it be made so for more than a few leagues, because the descent from the lake is great and rapid : in some places its course is over precipitous rocks, where it forms two very fine cascades—one near the little village of San Pedro Martyr ; and the other, with much the greater fall, a little below.

Guatemala is divided into seven departments or corregimientos, each presided over by a Corregidor ; three of these extend along the Pacific coast from south-east to north-west—namely, Guatemala, Solola, and Quesaltenango ; two interior, Sacatepeques and Totonicapan ; Vera Paz, the largest of all, is to the northward ; and Chiquimula on the east. The chief places may be set down as follows :—

<i>Departments.</i>	<i>Principal Towns.</i>
Guatemala . .	Guatemala (City), Amatitan, Escuintla, Jalpatagua.
Solola . . .	Solola, Atitlan, Masatenango.
Quesaltenango .	Quesaltenango, San Marcos, Tejutla, Tapachula.
Sacatepeques .	Old Guatemala (or Antigua), Chimaltenango, Patsun.
Totonicapan .	Totonicapan, Momostenango, Gueguetenango, Jacaltenango.
Vera Paz . .	Salama, Rabinal, Coban, Cajabon.
Chiquimula .	Chiquimula, Zacapa, Gualan, Casaguastlan, Esquipulas.

Besides these there is a large number of populous towns, as unnecessary as it would be tedious to enumerate.

Population is by no means equally spread over the different departments ; it is chiefly concentrated on the

line of the Cordillera, not extending to the sea coast, which is thinly peopled. Sacatepeques, Solola, Quesaltenango, and Chiquimula, contain the greatest numbers; the proportion of Guatemala, that is the corregimiento, with the exception of the city, is small; Vera Paz, largest in superficial extent, has proportionably but few inhabitants.

The general fertility of the soil, its aptitude to every species of cultivation, and the agreeable variety of climate, cannot be too highly extolled; in these particulars it yields to no section of Central America, and is to be preferred to most. Maize and wheat are abundant, and of superior quality; rice is excellent; the tropical fruits and vegetables are good and in great variety; the produce of leguminous plants is equal to the best of that grown elsewhere. All European fruits and garden stuff grow kindly; and if the Indians, who are the only cultivators, were better instructed in the art of horticulture, they could be carried to an enviable degree of perfection: in fact, but few regions are so well endowed with the capabilities of producing all that ministers to the comforts as well as luxuries of life. Of things more important in a commercial view, cochineal at present holds the first rank; to which may be added, cacao, tobacco, sugar, coffee, silk, cotton, wool, and a numerous list of minor articles.

Many individuals are owners of large tracks of land, from which, comparatively speaking, they derive but little benefit. There are also still larger spaces unappropriated, called "*tierras valdias*," and may properly be termed national domains, as the Government holds the right of selling, or otherwise granting them, with legal titles, to persons who may be desirous of occupying them. In the aggregate of all these lands, the largest portion, perhaps

three-fourths, can be considered only as waste ; because, in addition to the *valdías*, the estates held by individuals contain, in proportion to their size, but a small quantity of cultivated ground, being generally used for grazing a few thousand head of cattle, or else they remain entirely unproductive.

The number of the population being small in proportion to the extent of territory, is unquestionably one cause of this evil : the great fertility of the soil, by alluring the people to habits of indolence, and there being no urgent cause to stimulate their industry or to excite an ambition to improve their social condition, is certainly another : while some of a political nature contribute in no small degree to this state of abandonment. What a vast field is here laid open to a well-devised plan for encouraging immigration ! Were some of the overflowing industrious thousands of Europe invited to seek a domicile here, and to be protected in their occupancy to the same degree as the native of the soil is protected ; without granting invidious immunities, but also not subjecting them to other conditions than such as are justly and equitably imposed upon the whole community, an immense improvement in the general circumstances of the country would be apparent in a very few years. Agriculture would be carried to a perfection of which at present there is no idea here ; it would be characterised by a greater variety of productions for exportation than it can now shew ; for instead of two or three articles, it could send out many that would find a ready sale in all the marts of commerce. The useful arts would be gradually taught to all classes ; even the tranquil in-offensive Indian, reduced as he is by ignorance and long neglect to semi-barbarism, would acquire information from

the example of others, that could not fail of raising him above the degraded condition he lives in, and rendering him a more useful member of society. Colonization has frequently been found a difficult subject to manage, both as regards the immigrant, and those who receive him ; in fact, it is one of the complicated problems of political statistics. 'The first should have fair prospects of success and encouragement held out to him ; the people with whom he is to be associated should be taught to welcome him as a friend that will be a useful coadjutor in preparing mutual benefits, not as a competitor, or one seeking to appropriate to himself exclusively advantages that ought to be common to all. Difference of habits, language, and most especially of religion, should be viewed with kind consideration ; the latter, particularly, should not be allowed to cause heartburning and disrespect ; therefore, some indulgence on a point so much cherished by all the human family, as religious worship according to their creed, might be advisable, and would be more agreeable, were it allowed to be public ; for all men feel a powerful interest in obtaining for themselves this degree of liberty, which has not been in modern times found inimical to the well-being of any country. To be productive of good, immigration must be regulated upon sound principles. To permit an influx of strangers who can practise no useful trade, or do not bring with them the means of ensuring subsistence until they can acquire a permanent settlement, would not be prudent, although it ought to be conformable to the dictates of humanity. It is possible, however, to evade an evil of this kind, by establishing and publishing conditions that would invite laborious and serviceable classes, without being an enticement to the idle and vagrant.

It would be incorrect to say no effort has been made in this direction, because in 1824 a Decree was passed by the first Constituent Assembly with the professed view of promoting Colonization ; but as there is a wide difference between enacting a law, and taking the necessary measures for securing a beneficial effect from it, this, which was termed the "Law of Colonization," has been suffered to remain a dead letter. The intention was worthy of praise, but the end was not accomplished, because the means of carrying it out were omitted. In searching for the cause of this failure, short-sighted prejudice comes prominently forward : the supposition that this had a baneful effect may appear uncharitable, but it does not necessarily follow that it must be an unjust one. A law conceived by men of more enlarged ideas than the generality, who believed truly they were promulgating it for the advantage of their common country, was ultimately of no avail, from not being enforced and adequately supported by their successors. These, possibly without being aware of it, seem to have been imbued with the ideas of jealousy and exclusion, so peculiar to Spanish dominion ; and radicated by a sort of prescription during long ages, were apparently not willing that strangers should be permitted to participate in the advantages a fruitful soil would yield to their labours, even when they themselves were not disposed to till it, or were without resources for doing so.

Besides selfishness, incorrect ideas of political economy may be charged with some share of the mistake, in not giving greater effect to this law. A notion was prevalent at the period among some, that there would be difficulty in keeping a foreign population of several thousands in due subordination, and that in the possible event of invasion or attack from the exterior, domiciled strangers would be

more ready to join the enemy, than be hearty in the defence of the territory and government under which they lived, against him. Such an inversion of ideas could not have taken place in the minds of men accustomed to examine the causes, or investigate the principles by which society and communities are bound together. There were no plausible grounds to imagine an aggression from any other powers than Spain ; from her alone was it to be apprehended even by the most sensitive on this point ; for then, as since, every other power was, and is, willing to form friendly relations with Central America ; whilst against its former masters the stranger from every part of the world would have courageously stood in arms, had there been necessity for his services, because in so doing he would have been well aware he was protecting his home, his family, his property, and everything that was dear to him, while he was defending the country of his adoption. Other advantages to be derived from an extraneous population were not adverted to ; namely, the emulation and competition that would be excited in an imitative people, by the introduction of various arts by the new comers ; who would naturally be anxious and striving to augment their means of living by the exercise of their industry, and employment of their peculiar talents ; the extension of which would inevitably enlarge the conveniences of the whole community, and be instrumental to a wider spread of civilization : consequently, of general improvement. To suppose this could be a cause of danger to the common weal, was speculating on chimeras instead of seeking evidence from authentic facts ; and wholly disregarding the example which had been given by the intelligent foresight of the Government, and practical good sense of the people in the United States, than which,

history, either ancient or modern, shews none more decidedly positive and applicable..

The Corregimiento of Guatemala

extends south-eastward to the river Paza, boundary of the State of Salvador ; on the north-east it joins Chiquimula, the north Vera Paz ; with Sacatepeques and Solola on the north-west. The coast line of the Pacific is about 40 leagues in length, nearly in the middle of which is the port or roadstead of Ystapa, in latitude $13^{\circ} 53'$ North, and longitude $90^{\circ} 43'$ West, of Greenwich. The whole superficies is 500 square leagues, a little more or less, much intersected by ranges of mountains in the interior parts, but nearly flat along the coast. With an excellent climate, and fruitful soil, it possesses every requisite for carrying agriculture almost to an indefinite extent : the whole population, including the capital, may be estimated at about 90,000, the central part containing the greatest proportion. This district is principally noticeable at present for the production of cochineal, which is cultivated in the neighbourhood of the town of Amatitan, where in good seasons large crops are gathered, amounting sometimes, under favourable circumstances of weather, to 5,000 seroons, of 150 lbs. each, first rate in quality. The nopal, (cactus opuntia,) on which this valuable article is produced, yields large returns from a space of ground, small as compared with that required for many other species of plants ; it grows freely and luxuriantly, especially on soils well suited to it ; but, like all other objects of rural industry, requires constant care and attention as to pruning, replanting at certain periods, and other details, to keep the plantation in a profitable state of bearing. Speaking

generally, it is exposed to few accidents; against which the cultivator of moderate experience cannot find a remedy: one, however, there is, that all his prudence and foresight is not sufficient to guard him from; this is heavy and unseasonable showers of rain. If these should occur from the beginning of April to the middle of May, he may have the mortification of seeing the reward he has anticipated from his labour and care greatly diminished, if not wholly lost. The insects usually come to maturity about the commencement or the middle of April, when the collection takes place, and continues for four or five weeks, as the less advanced portion of them comes to perfection. Should light showers occasionally happen during this process, the injury will be little or nothing; but a heavy fall of rain, such as is peculiar to tropical countries, will in the course of a day, nay, even in a few hours, cause a most serious loss, by entirely washing the cochineal off the large succulent leaves of the plant. An unfortunate event like this reduces a plantation to a state of almost barrenness, that a day before presented the prospect of an abundant harvest. From the regularity of the seasons, accidents of this nature are not very frequent; for, generally, the rains do not set in before the middle of May, by which time the whole crop ought to be got in. Taking one year with another, and supposing proper management, a plantation of nopal gives a handsome profit.

Guatemala—indeed it may be said two departments of it—is the only portion of Central America in which this valuable product has been successfully cultivated, and exemplifies in the most positive of all ways, that of commercial value, the benefits that will always follow the judicious introduction of new branches of industry; for twenty years ago, in fact less than twenty, the whole

country did not furnish a single seroon for exportation. The whole of the land now occupied by nopal does not exceed 34 cavallerias, (which are equal to 4,177 acres, or 1,690 hectares,) and was previously of small value, being used only for the culture of ordinary articles, or else lying waste; whereas, under its present employment during the number of years before specified, or rather since 1830, the aggregate amount of cochineal it has produced is 55,532 seroons, or 8,329,800 lbs., the value of which may be very faintly taken at ten millions of dollars.* It is singular that even among a people so little speculative as those of Central America, the signal success which has attended this one article should not have operated as a stimulus to the proprietors of land to turn their thoughts towards some others, and there are many, which if they were not to yield equal profits, would nevertheless remunerate them abundantly for the skill and capital they might be inclined to lay out upon them.

The other productions of this corregimiento are grain, principally maize, in large quantities, of the best quality; pulse, sugar, some coffee, so good as to call forth reproach for the neglect it is treated with. As this division of the country has a sea coast of several leagues, no portion of it is at a very inconvenient distance from the port of Ystapa, which offers a point of embarkation for whatever quantity of coffee might be grown, and no ship arrives there that would not gladly receive it as a whole, or part of a cargo. The growth of this article is therefore well worthy of more attention than is given to it, especially as tracks of land suitable in respect to soil and situation could be appropriated to the culture of it, which are now

* See Cochineal, Appendix.

less profitably, or not at all occupied. The cultivation does not require much labour or expense after the ground is once cleared ; the plants will grow in any soil that is moderately light, so as to allow of the roots penetrating downwards easily, and will often flourish even in land not good enough for many other growths. If the soil be very rich they will grow luxuriantly, but the quality of the crop will not be so fine as that from poorer land ; the side of a moderately elevated eminence is considered a favourable position for a plantation. The seed may be sown in nurseries and afterwards transplanted, or it may be consigned at once to the spot where it is intended the trees shall remain, which method has some advantages, as they sooner arrive at maturity than when transferred, and from having firmer hold in the ground, better resist the force of strong winds. Raising a few tons of coffee on an estate might answer well enough for home consumption, but if exportation be calculated upon, the business should be undertaken much more extensively. A plot of ground 100 yards square would be sufficient for a thousand trees, which, if well tended and kept tolerably free from weeds, will come into partial bearing within two years. At four years they will yield abundantly, and continue to do so for fifteen or twenty years, and often a much longer period. The medium annual produce of a tree in good condition may be estimated at four pounds weight of merchantable coffee, and in some colonies where this business is made an object of importance, as much as seven pounds have been gathered from a tree of five years old. This cursory remark, drawn from facts presented by the practical industry of other countries, in no way more highly favoured than this, or only by a more active spirit of enterprise, will, if it come under the notice of persons who feel an interest in the

prosperity of their own, help to shew that the growing of coffee in *large* quantities would open a source of wealth too rich to be neglected, either by the Government or individuals; the first, by all the influence in its power should favour and encourage the latter in producing an article of commerce constantly in demand, for supplying the increasing consumption of Europe only, now estimated at about 300 millions of pounds annually. Numberless situations, not less suitable to the growth of cotton, could be selected with equal convenience for embarkation; and the reference may be extended to many other articles. Few circumstances more forcibly attract the notice of observant strangers than seeing so much land, so well adapted to almost every branch of agriculture, made so little use of; want of hands for labour is erroneously assigned as the main cause of this neglect, for it may be safely asserted, the quantity actually under cultivation is much less than might be expected, considering the amount of population as it really is.

A concise description of the city of New Guatemala, as being the capital of the Republic, may not be uninteresting. It is situated at the northern extremity of a plain elevated 4,372 feet above the level of the sea, and about five leagues of superficial measurement, between two ranges of mountains, in $14^{\circ} 36'$ of North latitude, and $90^{\circ} 28'$ very nearly of longitude West from Greenwich, under a climate remarkably healthy and agreeable for its equability. The temperature of the locality is admirable, never varying to excess of heat or cold; the mean of the year, as indicated by Fahrenheit's thermometer exposed openly in the shade, is between 68 and 69 degrees; the mean monthly differences rarely exceeding three degrees, and the daily difference of the extremes seldom amounting to 10 degrees;

the greatest heat of the year, with very few exceptions, does not pass 75 or 76 degrees, while the least seldom goes below 55 degrees; occasionally it has gone as low as 48 degrees for a day or two, but this, under peculiar circumstances of cold north winds, is an exception to the general law of the temperature. The movement of the barometer is equally steady, the mean height being about 25 inches six-tenths (English); the daily oscillations are little more or less than a tenth, and the monthly ones seldom more than two tenths; hence it will be inferred that an atmospheric influence more genial, or subject to fewer vicissitudes affecting health or enjoyment, cannot easily be found in any region of the globe. Yet with this great advantage, the selection of the site for a large city cannot be unrestrictedly commended: the defect in the position is its being environed on all sides by deep ravines,—through which all the water falling on an extensive space is drawn off, without being applicable to the purposes of irrigation, so especially desirable in a situation where during one half of the year no rain refreshes the soil; for this reason the lands immediately adjacent to the city are not cultivated sufficiently to supply the many wants of a metropolis. The dreadful earthquake of 1773, which caused so much devastation in Old Guatemala, gave rise to the idea of building a new city at a distance from the two immense mountains called the Volcan de Agua and the Volcan de Fuego (the latter supposed to have been the cause of the catastrophe); and New Guatemala was commenced in 1776. Laid out in a quadrilateral form, with the sides facing the cardinal points, the extreme length is little less than a mile, with a breadth nearly as much; the streets are in correct alignment, crossing each other at right angles, each being about 40 feet broad. The great square, nearly in the

centre, is 150 yards each way. The east side is occupied by the Cathedral, buildings appertaining to the Ecclesiastical authorities, and the Archiepiscopal Palace. On the west stand the Government House, Ministerial Offices, and other Establishments of the Executive authorities, having the Mint in the rear. On the north the Cabildo, or Town Hall, Municipal Offices, and the Prison. On the south there is a range of shops. Three sides are fronted by a colonnade of square pillars and arches, but the eastern side is open : in the middle stands a fountain, or rather stone basin, of good proportions, with a permanent supply of water. The Cathedral is a neat substantial edifice ; the façade handsome, without aspiring to architectural grandeur ; the interior, with its nave and aisles in a very chaste style, is lofty, well-proportioned, and not too much loaded with ornament ; the great altar is in good taste and elegant, having behind it an excellent organ, constructed by a native artist. The other buildings on this side are more remarkable for simplicity and plainness than elaborate design. The porticos, owing to their moderate elevation, with only an unadorned parapet over them, present nothing to excite the admiration of a stranger ; yet the appearance of the square is sufficiently agreeable, and would become much more so, were it not obstructed by several ranges of low wooden tenements immediately in front of the Cathedral, and extending half way across the place, much diminishing the good effect the whole would otherwise have. The daily market for fruit, vegetables, and small wares of all descriptions being held here, these excrescences are tenanted by retail dealers, and the rent of them giving a considerable revenue to the municipal funds, it is not probable they will be transferred to another spot, although there are situations that would be quite as suitable to them.

Besides the principal square there are several others, each with its central basin constantly supplied with water, but none presenting anything calling for particular notice. There are in all twenty-four churches, some of them good and massive buildings; internally much adorned, though not distinguished by superior specimens of the fine arts: they possess no paintings of the old masters, who were, and are, most worthily the pride of Spain. Considering the former wealth of this country, and the means it had of acquiring some of these productions, it seems rather surprising that none were sought for to decorate the temples of Divine worship. The private houses are substantially constructed, but to guard against the repetition of former disasters, it was thought expedient to keep them low; for which reason none are of more than one story from the ground: some are very spacious, having two or more quadrangular courts in the interior, round which runs a corridor, affording shade and protection from rain in the wet season, and from the sun at all times; besides which, many of them have gardens for the cultivation of flowers and fruit-trees, though rarely well attended to. On each side of the courts are distributed the principal and secondary rooms, communicating with each other on the inside, forming altogether commodious dwellings, well ventilated and adapted to the climate. The first-rate houses occupy a greater extent of ground than those of a similar class in the cities of Europe; but the plan and distribution in all being peculiarly Spanish, does not furnish so many conveniences, nor afford opportunity for the display of European elegance. The mildness of the climate makes contrivances for the diffusion of artificial heat in the apartments unnecessary, fire-places and chimneys are unknown; but doors and windows being lamentably ill-adjusted, an improvement in them, to repel

a current of air occasionally, is quite desirable. Every division of the city is profusely supplied with excellent water, which for the reason before assigned, is brought from a distance of a couple of leagues by two aqueducts; one on the south-east, of good construction, passing for the distance of several hundred yards over a range of lofty arches; the other on the south-west, bringing from two distinct ranges of hills copious streams of water, by which convenience, cleanliness, and healthiness are well consulted; indeed there are few large towns wherein these important particulars have been better attended to. All the streets are paved, many of the leading thoroughfares having a broad path of flagstones on each side for foot passengers. The night police is established on a respectable system, which has greatly diminished the number of nocturnal depredations, and other offences against the public peace; a benefit further increased by having the main streets lighted during the night. Among the public buildings may be enumerated the University of San Carlos, the Tridentine College, the Hospital of San Juan de Dios, having contiguous to it the general Cemetery, (interment in the churches, or within the precincts of the city being prohibited,) four public lavaderos, or washing-places—two on the southern extremity, one on the north, and one on the east; a circus wherein bull-fights and equitations are occasionally exhibited: at a short distance on the southward is a public slaughter-house, where all cattle for the general supply must be killed. A respectable theatre has not yet been erected, neither have walks or places for public recreation been appropriately laid out. Dramatic performances are sometimes given, but in places destitute of the requisites for such representations; consequently this species of amusement does not find the

encouragement it is entitled to, and would have under proper management, among a people fond of attending shows and processions. The population of the city and suburbs cannot be estimated at more than 40,000; probably it is rather below this number.

Next to the capital, Amatitan has become the town of most importance in the corregimiento; formerly it was known as little more than a bathing-place, without other resources than the manufacture of rush mats, the cultivation of melons, with a few other articles of trifling importance, and the fish taken in the lake. It is now a wealthy and flourishing place, deriving its prosperity entirely from the extensive plantations of nopal formed around it. Population has been attracted thereto, in proportion as it became more thriving, and the demand for labour increased. Twenty years ago there was not above 3,000 inhabitants in it and the neighbouring towns of Villa Nueva, Petapa, and Palin, comprising an extent of nine square leagues; but there are at present upwards of 9,000 on the same space. On the southern shore of the lake, at a short distance, rises an immense picturesque mountain called the Volcan of Pacaya, not quite extinct. It is an isolated prominence, of several leagues in circuit, covered to the summit with abundance of fine timber.

The Corregimiento of Zacatepeques

adjoins that of Guatemala on the westward, but is separated from the sea coast by a strip of the latter: on the north-west it has Solola, and on the north Vera Paz. It contains 200 square leagues. The whole district is mountainous, consequently it presents a variety of climate, for the most part mild and agreeable, but in some places in-

clining to cold. The population, about 56,000, is not equally distributed, the northern part being thinly inhabited, while the southern is densely peopled, for within a radius of a few leagues round the city of Old Guatemala there are upwards of thirty towns and villages. The soil, especially where the inhabitants are most thickly concentrated, is remarkably productive in maize and other grain, fruits in great variety, with almost every kind of culinary vegetables; these, with poultry, hogs, &c., sustain an active trade by supplying the capital, which may be said to derive all its subsistence from this and the adjacent districts. The southern division abounds in situations fit for the growth of coffee, tobacco, sugar, of which there are several plantations, cotton, and other articles, that might be shipped at the port of Ystapa.

In the vicinity of Old Guatemala the first experiment of cultivating the nopal was made in 1811, and it is now surrounded by the plantations in a thriving state, yielding as much cochineal as those of Amatitan, that took up this branch of industry after seeing the good success attending it here. The Antigua is not without historical celebrity, being the first city founded by Pedro de Alvarado and the Spanish conquerors in 1527, and continuing to be the capital of the country until 1773, when it was so severely damaged by the great earthquake of that year, as to induce the determination of building a new one, when a position of amazing fertility, abounding in resources of all kinds, was nearly abandoned for one in every respect its inferior. Antigua remained for years little other than a pile of rubbish, as the great calamity left it, with the exception of a few edifices, of good construction, that withstood the heavy shocks with little injury. Recently it has begun to revive; a great number of houses have been

repaired and many others rebuilt with the materials of those entirely destroyed ; and although in many parts there remain enormous quantities of wreck unremoved, it has assumed again the appearance of a respectable town, with nearly 9,000 occupants. Situated on level ground surrounded by hills, in a delicious climate, with a soil of extreme fertility, well irrigated by streams of excellent water, abundant in provisions, fruits, and flowers, all in the immediate vicinity, there is no town in the whole Republic where a person wishing to retire from the harassing activity of a capital, or to employ himself in quiet agricultural pursuits, could fix his residence so agreeably as in this. The ancient city covered an extent of about 2,000 yards from north to south, and nearly 2,500 from east to west. The streets were spacious, regular, and, with slight deviation, parallel in both directions, the present town preserving nearly the same appearance ; in fact the old plan furnished a model for the city, that was closely adhered to in the distribution of the principal edifices, which occupy the same relative positions in the latter as in the former.

Due south of the town, towers the vast mountain called the Volcan de Agua, of a beautiful figure almost correctly conical, clothed up to a short distance from the summit with trees that uninterruptedly preserve their verdure. Notwithstanding its name, and although there is no historical record, nor even tradition, of the period when it was in a state of activity, indications are not wanting to lead to the supposition of its being an extinct volcano ; for at the top there is a crater, of somewhat more than 100 yards in depth ; the diameter at the bottom, which is not much short of 100 yards, and the interior talus, standing at an angle of nearly 45 degrees ; the

upper circumference is between 700 and 800 yards, separated from the exterior slope by an uneven stony breadth, nowhere exceeding 20 yards. The circular extent of the base has not been ascertained by direct methods ; but, roughly estimated by the familiar distances from point to point, it is supposed to contain a circuit of 20 leagues, which is probably rather *under* than *over*-rated. Barometric observations give to the highest point an elevation of 13,578 English feet above the ocean ; consequently it does not reach the region of perpetual snow within the Tropics, yet in the months of January and February the vapours are condensed into hoar frost, which occasionally, but not frequently, partially whitens the summit. The Indians of the little town of Santa Maria, on the eastern flank, annually derive a profit from collecting this imperfectly-formed snow, which they carry to New Guatemala, enveloped in dry grass, and dispose of to the confectioners. From Santa Maria the ascent to the crater by the various windings of the path is fully a league, fatiguing from the roughness and steepness of the way, but not very difficult, and not at all hazardous.

To the westward of the Volcan de Agua, and wholly unconnected with it, rises another vast mountain, known as the Volcan de Fuego, in which volcanic action is not extinguished. It emits smoke and ashes continually ; sometimes a slight lambent flame is visible at the apex, and internal rumblings are frequently heard. This enormous mass is not inferior to the other in magnitude or height, perhaps the elevation is rather greater, but an accurate measurement has not been made, as no person has ascended to the summit, from the impossibility of passing through the region of hot and loose ashes that cover the upper part on all sides. Two protuberances so

extraordinary, standing on the same plane, not very dissimilar in shape, adjacent, but quite distinct, isolated from, or but slightly connected with, the great Cordillera, present to the observer and geologist a spectacle both magnificent and interesting, which probably is not surpassed by anything of the same class in other parts of the globe. From trials made not long ago, it was shewn that the vine and the olive would flourish well in this locality: the culture of these was not permitted in former times, lest the produce should diminish the importation of wine and oil from Spain. No other effect has resulted from the experiment than a prospect of what might be done if persons of competent knowledge were to direct the undertaking; but from the want of these, no useful progress has been made.

The Corregimiento of Solola

has Zacatepeques and Guatemala on the eastward, Vera Paz on the north-east, Quesaltenango and Totonicapan westerly and north-westerly: it contains 400 square leagues. This is a mountainous region, thickly inhabited everywhere, except on a bank along the sea coast of nearly 20 leagues in length, serving chiefly as pasturage for herds of cattle; the climate is healthy, rather inclining to cold, or what beyond the Tropics would be termed temperate; but descending towards the coast, the heat becomes much greater. The soil is fertile, well watered, especially in the valleys, and very well cultivated in the more populous parts; the productions are maize, wheat, some barley, vegetables of most kinds, and fruits peculiar to the climate, as anonas or chirimollas, apples, pears, peaches, cherries, with some others,



J. W. del.

LAKE OF ATITLAN AND THE VOLCANO OF ST PEDRO.

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of tolerably good quality, even as they are allowed to grow without care or training, but would be excellent with better management. Besides considerable numbers of large cattle, there are also numerous flocks of sheep, the wool of which is employed in the manufacture of jerga and other coarse textures. These fabrics have been greatly improved in recent years, and are a profitable branch of industry, though sold by retail so low as two to four reals the vara, according to quality. Nearly in the middle of this district is the Lake of Atitlan, before spoken of, around which and near to its shores there are twelve or fifteen towns and villages of industrious Indians, employed in agriculture, or weaving and other trades. The largest portion of the inhabitants, perhaps three-fourths or more, are Indians of the Quiché and Kachiquel nations.

The Corregimiento of Quesaltenango

succeeds that of Solola on the west, or rather north-west, having Totonicapan on the north and north-east. This is a large district, reaching to the Mexican territory of Chiapas, containing not less than 500 square leagues; the coast line being about 26 leagues in length, and the breadth rather more than 16. The climate is various, but like Solola, is generally denominated cold, except on the coast. It is not quite so mountainous as Solola, having towards the sea large spaces of comparatively level ground; yet the traveller on his road to Chiapa will have many difficult, and some dangerous ascents to climb: the soil is fruitful, yielding wheat, maize, cacao, sugar, with fruits, roots, and vegetables, like those of Solola; besides these there are large flocks of sheep, herds of cattle, and

mules. It is an important part of the State, in respect to its productions, trade, and industry. The town of Quesaltenango, capital of the corregimiento, ranks next to New Guatemala; it is large, regular, and paved, with the houses well though fancifully constructed. The great church is an imposing building, with a highly decorated front; the interior, 250 feet in length, is lofty, much adorned, perhaps disfigured with many sculptured and other ornaments; there are six other churches of various architecture. The Cabildo is a good edifice of two stories high, with a corridor on each fronting the great square, in the middle of which stands a stone pillar or fountain. The daily market held in the square is well supplied with everything necessary for the consumption of more than 20,000 inhabitants, at which number the population is rated; the largest proportion being mulattoes and Indians, many of whom are considered as descendants of families that ranked as nobles before the conquest: some of these are still wealthy, and held in high respect by those of their nation. A great trade is carried on by this town with Guatemala and intermediate places, and even with Salvador; also with Chiapa. Juarros, in his History of Guatemala, represents the annual amount of their commerce in 1808 as follows:—

Wheat, 18,000 fanegas; about 29,000 English bushels.	
Cacao, in value	14,000 dollars.
Panela, coarse raw Sugar	50,000 „
Sugar, more refined	12,000 „
Woollen Fabrics	30,000 „
Cotton ditto	5,000 „

to which was to be added large quantities of provisions of all sorts. At the present time the value of panela and

cacao, may perhaps fall short of this statement ; but in the other articles there has, most probably, been an increase. Herein there certainly is evidence of the great resources of this section, nor can there be a doubt that they are capable of increase, were more demand for the produce created.

The Corregimiento of Totonicapan

is inland, having Vera Paz on the north-east, Solola on the south-east, Quesaltenango on the south-west, Chiapa on the north-west, and lands of the Maya Indians on the north ; the superficies is about 600 square leagues. More mountainous than Quesaltenango, the climate is perhaps more various, with quicker alternations between temperate and cold ; in the valleys, which are well watered, the land is fruitful. The principal productions are wheat, maize, some sugar, sheep, cattle, with fruits and vegetables peculiar to the temperature of different localities. It is tolerably well peopled by Indians, spread over the southern parts of the district ; the northern parts, particularly towards the Mayas, are but thinly inhabited : there are some large towns, having from 3,000 to 6,000 residents in and around them. The Quiche is the native language, which is so general, that in some of the villages the Spanish is little used, or scarcely understood. Near the town of Totonicapan there are some springs of thermal waters, greatly praised for their medicinal qualities. At Yxtatan, the last village to the northward, is a celebrated salt spring, from which the inhabitants, about 1,200, derive a profit by selling the salt which they make by the simple process of evaporating the water. At Chiantla, a small village about a league from Gueguetenango, the Indians carry on a tolerably good trade in lead, the ore

of which they extract from some rich veins in the immediate neighbourhood, reducing it to a metallic state by a rude and simple process. Were these veins wrought by a proper system of mining, they would yield considerable wealth, as the ore is well known to contain a portion of silver that would pay the cost of separation; but the present possessors not being skilful enough to perform that process, content themselves with selling the whole as lead. A promising speculation might be undertaken here, were not the Indians so jealous of their rights. They believe themselves to be, and undoubtedly they are, the indisputable proprietors of the mines; but from the suspicion and mistrust peculiar to their character, there would be difficulty in persuading them to form an association for working them in company with other persons. They cannot form an idea of such combinations, and their simplicity makes them suppose that any portion of profit divided with more intelligent workmen, would be so much loss to their community. Reflecting on the state of ignorance in which this class of beings have been kept, how they have been oppressed and degraded for ages, that they should be selfish with the little that is left to them, and fearful of being deprived of any part of it by arrangements they cannot comprehend, ought not to cause surprise. The three corregimientos of Solola, Quesaltenango, and Totonicapan, are reckoned to contain together 210,000 inhabitants.

Vera Paz (the largest Corregimiento)

is bounded by Zacatepeques and Guatemala on the south; Solola and Totonicapan on the south-west; Yucatan on the north and north-west; British Honduras, the Bay of

Honduras, and Chiquimula on the east: this extensive track contains more than 1,200 square leagues. A district so spacious presents, as may naturally be supposed, frequent alternations of mountain and valley, with much variety of climate. Generally speaking, it is temperate and healthy, with a soil of the best character, adapted to almost every species of agriculture, yet turned to little more account than furnishing subsistence to its own inhabitants, that are estimated at rather above 66,000, spread unequally over the territory; most thickly in the south and south-west, bordering on Zacatepeques and Solola; in which division there are some populous towns, as Coban, 12,000; Rabinal, 6,500; Carchá, 5,000; Cajabon, 4,000; Salamá, 4,500; Cubulco, 3,000 to 4,000, &c. &c. In the northern direction, near and around the Lake of Peten, there are nearly 6,000: of the total number of inhabitants full nine tenths are Indians. It should be a subject of regret to the Government that a region so commendable in every way as this is, remains almost in a state of nature, and the great resources to which the hand of industry ought to be invited, should be entirely neglected; particularly as cacao, coffee, (plants of both are found wild in the forest,) indigo, and, it is asserted, the nopal, are indigenous to the soil. Brazil, with other dye-woods, mahogany, rosewood, with other species of valuable timber, are sufficiently abundant, with a river that could be so far improved as to make it an outlet for these productions to a port on the ocean.

The Corregimiento of Chiquimula

is the north-easterly corregimiento of Guatemala, bounded in that direction by the territories of Honduras and

Salvador ; on the south-west and west it joins that of Guatemala ; having Vera Paz on the north-west and the Bay of Honduras on the north. It comprehends about 500 square leagues, and contains a population exceeding 80,000. Much intersected by mountains, the superficies is irregular ; and the temperature, except in some few places, is generally higher than that of other corregimientos, the heat being almost, if not quite equal to that of the coast. Taken as a whole the soil, irrigated by numerous rivers and streams, especially in the valleys, is good and fruitful ; but, as in most other parts of the State, cultivation is not carried to the extent it might be, for there are districts suitable to the growth of a variety of products. At present the agricultural wealth consists of tobacco, of excellent quality, some cotton, maize, rice, and frixoles in abundance. Sugar-cane is grown for making an inferior sort of sugar called rapadura, used principally for distillation ; but a considerable quantity of it is consumed in making chicha, a favourite drink of the Indians, not without intoxicating qualities, if taken largely, which is frequently the case. There are many extensive grazing farms that maintain great numbers of horned cattle. The horses and mules of this district are of good breeds, and consequently highly esteemed. Some of the chief towns may be called populous : as Chiquimula, with 4,500 inhabitants ; Quetzaltepeque, 4,000 ; Acasaguastlan, 3,600 ; Zacapa, 3,000 ; Jilokepepue, 3,200 ; Mita, 3,300 ; Jalapa, 3,500 ; Gualan, 2,000, &c. &c. One of the prominent places of the corregimiento is the town of Esquipulas, not that it is of importance in itself, for it contains only 1,800 inhabitants, and is situated in a humid unhealthy spot ; but because there is an annual fair held for three days, beginning on

the 15th January, which draws together a large concourse of people from all parts, some for the purposes of traffic, others for the sake of novelty, amusement, and dissipation. The great magnet which attracts a large portion of the visitors is a religious one, which places Esquipulas in the same category as Jerusalem, Loretto, and Mecca. It is, therefore, resorted to by thousands from conscientious motives, and belief in the efficacy of such a pilgrimage: the object of devotion is a celebrated image of the crucifixion. The old parish church of the town having been found insufficient for the accommodation of so many visitants as were annually assembled, a new one was built, and first opened for worship in 1758. This is a handsome edifice, and standing on a rising ground in an open plain, about a mile distant from the town, has an interesting as well as an agreeable appearance, contrasting with the wild mountainous scenery around it.

On the left bank of the river Motagua in the lands called Quirigua, about six leagues from the town of Yzabal, on the Gulf of Dulce, there are some remains of antiquity, that, were they better known, would excite the admiration of archaiologists. They consist of seven quadrilateral columns, from 12 to 25 feet high, and three to five feet at the bases, as they now stand; four pieces of an irregularly oval figure, 12 feet by 10 or 11 feet, not unlike sarcophagi; and two other pieces, large square slabs, seven and a half feet by three feet, and more than three feet thick. All are of stone resembling the primitive sandstone, and, except the slabs, are covered on all sides with sculptured devices, among which are many heads of men and women, animals, foliage, and fanciful figures, all elaborately wrought in a style of art and good finish that cause surprise on inspecting them closely. The

columns appear to be of one piece, having each side entirely covered with the figures in relief. The whole have sustained so little injury from time or atmospheric corrosion, that, when cleared from an incrustation of dirt and moss, they show the lines perfect and well-defined. Evidently they are the performances of a skilful and ingenious people, whose history has been lost probably for ages, or rather centuries. They do not resemble in sculpture those of Palenque, in Chiapas, described in the works of Lord Kingsborough and Mr. Waldeck ; nor are they similar to those of Copan, recently so well represented by Mr. Catherwood in that of Mr. Stephens ; in several respects the workmanship is superior to either, and is in better preservation. These interesting fragments are concealed in the thickness of the forest, a short mile from the river ; some patience and labours are required to find them out, but those are well repaid, and curiosity is much gratified by a sight of them. No mention of these monuments of an unknown period is made in the "Decades" of Herrera, nor in the writings of any other historian of the conquest ; nor by Fuentes, who wrote in Guatemala about 1700, whose manuscript now belongs to the municipality of the city : even Indian tradition does not commemorate them. Investigation as to their origin and purpose would lead into a labyrinth of conjecture. They suggest the idea of having been designed for historical records rather than mere ornament ; and as so little is known of this country previous to the subjection of it by Pedro de Alvarado and others, they well deserve the scientific consideration of antiquarians.

The superficial extent assigned to the seven corregimientos will not together be found to correspond exactly

with what is set down as the whole territory of Guatemala: the discrepancy is caused by uncertainty as to the limits of Totonicapan and Vera Paz on the northward; the difference is about 500 leagues, mostly land occupied by uncivilized Indians, as the Mayas, Lacandons, &c.

Looking to the large extent of territory and amount of population of the State, (600,000,) there will result, in round numbers, something like fifty acres of land to each individual,—a portion far beyond the management of the occupants, even supposing capital and other means were not wanting; but of this quantity it may be safely asserted not a tenth part is really cultivated, and so long as the present injurious custom of suffering land to lie waste is continued, little improvement can be expected. A soil, however fertile and extensive it may be, never can be anything more than a subject of vain boast to a country, so long as there is no disposition to take advantage of its richness; keeping it as it now is will be shewing an avarice of desolation, the hoarding of a wilderness. This is a consideration not only worthy of, but demanding the attention of Legislature, Government, and proprietors. The population is really competent to supply a greater amount of labour than is demanded; hence idleness, misery, and ignorance have become almost the characteristic of the people, with rare exceptions. This is a powerful reason why new branches of industry should be diligently sought for, as well to give work to all who could be usefully employed—and the number is great, as to increase the public revenue, which could not fail of being benefited by greater exportation of agricultural produce; for this would naturally augment the amount of importations.

Another cause of gradual, indeed rapid improvement, would be found in a well-devised system of Colonization,

which, in the present state of political economy, is not a problem of such difficult solution as it formerly was; for the overflowing population of Europe is now seeking an outlet in distant regions of the globe, and could be attracted to this, as it is to many others with inferior advantages of climate and capabilities, were measures adequate to the purpose effectively taken. The subject requires patient deliberation, and a well-formed plan; but means of satisfying both points could be found, if seriously taken in hand. The indiscriminate admission of all classes of the needy, helpless, and idle, would be far from prudent; but thousands of laborious husbandmen, clever artisans, with other persons of good education and character, possessed of small properties, but not sufficient to enable them to compete with larger capitalists, would be drawn together by the hope of bettering their situations in a country where there is ample room for the expansion of their energies, were they invited by a liberal policy, and the certainty of lawful protection to their properties and persons. Privileges beyond those granted to native occupants should not be sought for by new comers, nor would it be proper in a prudent Government to grant them. Sufficient would be done by giving the impartial safeguard of the laws to the adventitious subject in the same degree as to the native one. As a point deserving consideration it may be said again, even at the hazard of incurring blame for repetitions, that some indulgence should be granted in matters of religious opinion; as this would be a great incentive to immigration, especially to a respectable class of colonists, that it would be most desirable to have; and if it were extended to the permission of public worship, more powerful would be the effect of spreading satisfaction, content, and subordination

among them. From such a conclusion there need not be apprehended anything injurious to Christian morality, nor to the ecclesiastical establishment of the Republic; for experience is daily shewing that in newly settled districts, men of all creeds can follow their avocations, and live in social harmony and good fellowship with each other, when no restraint is imposed upon conscience.

These remarks on the proportion of waste to cultivated land, the necessity of increased cultivation, the benefits arising from immigration, &c., are applicable to the country generally, and need not be referred to again, or at most only incidentally.



THE STATE OF SALVADOR

comprehends a line of sea coast on the Pacific, extending from Point Chiquirin, in the Bay of Conchagua, (longitude $87^{\circ} 42'$), to the mouth of the River Paza (longitude $89^{\circ} 50'$). It is bounded on the north-west by this river, which divides it from Guatemala; by the State of Honduras on the north and north-east; and the Bay of Conchagua on the south-east. The coast line extends about 45 to 50 leagues, on which are situated the port of La Union, within the Bay of Conchagua, the roadstead of Libertad, (latitude $13^{\circ} 28' 40''$, longitude $89^{\circ} 14' 22''$ W.), and that of Acajutla, or Sonsonate, (latitude $13^{\circ} 33' 36''$, longitude $89^{\circ} 42' 45''$ W.), each being a port of entry for foreign merchandise. Salvador is the smallest section of Central America, but by far the most populous in proportion to its size; the superficial extent being no more than 577 square leagues, while the number of inhabitants, as before stated, is 280,000; thus giving 485 individuals to the square league. In all respects it is an important district, and, from natural resources as well as position, capable of being rendered most flourishing; but owing to the civil discords which have so generally and continually afflicted the country, from one extremity to the other, during a long series of years, it has suffered numerous checks to its prosperity; its commerce has been greatly diminished, and its agriculture has sustained immense injury. Along the sea coast, from Libertad to Conchagua, on a breadth of four or five leagues, the land is moderately level and low; from Libertad in the opposite direction, towards Sonsonate, it is more elevated, also broken into ridges and irregular

masses ; the interior is intersected by many short ranges of mountains, not of very great height, but being separated into distinct groups, give to the whole territory a wild, rugged character. This inequality of surface produces variety of climate, that generally is warmer than in Guatemala, and in many parts towards the coast the temperature is very high ; taken altogether, it is healthy, little exposed to epidemic complaints, and but few endemic ones : the localities where these prevail are far from numerous.

The State of Salvador is not perhaps so well watered as Guatemala, yet is by no means deficient of plenty of small streams that dispense fertility in all directions ; especially in valleys lying between the ridges of heights. Large rivers are not numerous ; the chief of these is *the Lempa*, which, taking its rise near Esquipulas, in Guatemala, runs nearly south-easterly for about 30 leagues, forming in this part the boundary between Honduras and Salvador ; then, bending to the southwards, runs on to the Pacific, a little westward of the Bay of Jiquilisco, where the embouchure is obstructed by a very dangerous and impracticable bar. It is the outlet of the Lake Guija, about five leagues in length by two and a half in breadth, distant two leagues from the town of Metapam ; in its course it receives several affluents of moderate size, flowing from the State of Honduras, as the Guarajambala, Torola, &c. The Lempa, by the appliances of art, is susceptible of being made navigable for barges and such like craft : then it would undoubtedly be of great benefit both to Salvador and Honduras ; but under the present circumstances of each, such an undertaking is remote from all expectation. Great amelioration in the condition of both States must take place before such a work can be seriously

thought of, and many years will probably elapse before this improvement becomes apparent; pecuniary means are, and long will be deficient in both; a vast increase in agriculture as well as traffic must take place before such an expenditure as would be required can be deemed warrantable; adjacent roads must previously be made practicable. A short canal of about two leagues would also be requisite for opening a communication from the river into the Bay of Jiquilisco, without which the enterprise would be useless, because the formidable bar at the river's mouth forbids all hope of an exit to the sea in that direction. It is always permissible to speculate upon and shew the practicability of carrying out a useful undertaking, but the probability of its being effected can be developed only by time and the evidence of facts. The river next in magnitude to the Lempa, is the Paza, falling into the Pacific between Acajutla and Ystapa, more remarkable for the dangerous bar at its mouth than anything else. Another large stream coming from Honduras, the Sirama, or, as it is more usually called, the river of San Miguel, from passing near that city, after a long course reaches the sea at a league or two south of Point Chiquirin. The Jiboa, which has its sources near the town of Cojutepeque and the western slopes of the volcano of San Vicente, reaches the ocean between the Lempa and Port Libertad; these, with many other streams, could be made serviceable as the means of irrigation, but are not otherwise of importance.

Besides the Lake Guija there is another, that of Ylopango, five or six miles to the eastward of the city of San Salvador; it extends about nine miles in length, with a mean breadth of three, which, as a geological feature, connected with volcanic origin, is not unworthy of notice. On the north and south sides the ground is very steep and

rugged, rising in some places to five or six hundred feet in height ; in others, particularly on the south, to much more ; while at the eastern and western extremities it is nearly level with the surface of the water. No stream of any consequence falls into it, the only outlet it has is by a small one called the Desaguadero, which, running through a dark and deep ravine, almost impassable by man or beast, falls into the Jiboa, nearly opposite to the town of Santa Maria Ostuma, on the western flank of the volcano of San Vicente. Towards the southern shore, but at a considerable distance, there are three or four small islets, or rather rocks, a little above the surface of the water. In the lake there is very rarely a perceptible increase, but the depth is very great ; and as there is no remembrance of its having been sounded at any period, the popular opinion of its being unfathomable has obtained implicit credence with the illiterate inhabitants of the adjacent towns. The water, when taken up, is beautifully pellucid, but it is not considered wholesome either for drinking or bathing, nor suitable for domestic purposes. When at rest, it reflects, in the same manner as the deep sea, the azure of a generally bright sky ; but when the surface is ruffled by a breeze, it has the peculiarity of assuming a green colour, of that tint which the common people designate, very appropriately, as *verde de perico*, (parrot green,) and exhaling a sulphurous odour, not slight, but powerful and sufficiently disagreeable, becoming more intense as the wind increases in strength. When the upper stratum of the water is thus moved, fish, *pepescos* and *moharras*, are taken in great quantities ; at other times, when the lake is still, scarcely any can be caught. This fishery is a source of profit to the people of the neighbouring towns, who are proprietors of different

portions of the shores, the exclusive possession of which is secured to them by immemorial custom. The fish is of indifferent quality, yet much esteemed and praised by the inhabitants of San Salvador, because it is almost the only aliment of the kind they are acquainted with ; for although the city is no more than seven leagues from the ocean, sea fish is very rarely brought to it.

A great variety of mineral waters is found in different parts of the State ; there are also numerous thermal waters, many of very high temperatures, said to have peculiar and medicinal properties ; but as the waters have seldom, if ever, been analyzed, their salutary effects are more frequently imaginary than well ascertained : no doubt some of them, if carefully examined, might be found beneficial in many complaints. In the immediate vicinity of the city there are springs much used as baths ; some of an agreeable temperature, others too hot to be endured by the human body until the water has passed some hundred yards from the source, and become mingled with that of cold springs rising from nearly the same spot as the hot ones. About three leagues south-east of the town of Ahuachapam, there are some remarkable hot springs, called the Ausoles, (or Esoles,) emitting a dense white steam from a semi-fluid mass of mud and water in a state of ebullition, continually throwing large heavy bubbles to the surface ; this heated mass is in some black, in others red, or of an ochry colour. On the road from San Salvador to San Miguel, other ausoles are visible in different places on the sides of the mountains, always indicated by towering columns of white vapour, which they throw up to a considerable height ; in this part the people of the country give them the name of Infernillos.



G. U. S. A. E.

THE VOLCANO OF ISALCO

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Day & Son, Lith. to the Que. of

Nearly parallel to the line of coast, at five to six leagues distant from it, the five volcanos, as they are termed, of Apaneca, Yzalco, San Salvador, San Vicente, and San Miguel, are distinguishing features of the State of Salvador, especially as they are seen from the sea. Of these San Salvador and San Vicente are the loftiest; the exact height of them has not been ascertained, but may be estimated by comparison at between 8,000 and 9,000 feet. Yzalco is the most remarkable of the whole from its incessant activity, in which it is unequalled by any other on the American continent; eruptions of flame, ashes, smoke, and steam, distinguishable by its whiteness, accompanied by explosions so loud as to resemble the reports from a battery of mortars of the largest calibre, succeed each other at short intervals, and are frequently heard at the distance of 40 or 50 leagues, in the city of Guatemala, for instance, and the Bay of Conchagua. In the daytime a column of black smoke, issuing from the crater, is always visible, from the interior of which ascends another of white vapour, reaching a much greater elevation, expanding at the top into the figure of an immense plumage, altogether presenting an appearance not more singular than admirable. At night, the beauty of the spectacle is greatly increased, for then the fire and light are extremely brilliant, while a vivid shower of burning sparks, not unlike the pieces of artificial fireworks called gerbes, but incomparably more vast, falls back upon the summit and sides of the mountain; at the same time stones and scoria, in a state of bright incandescence, are seen projected to the height of 1,200 or 1,500 feet; which in their descent the eye can trace for a considerable distance as they roll down over the ashes on the flanks. In a dark night these eruptions are magnificent; but

with a bright moon the effect is still more varied by the lights reflected from the ascending and spreading cloud of vapour. During the day, in moderately clear weather, the smoke is visible many leagues off at sea, as is the fire at night: it is thence useful to mariners as a leading mark for the anchorage of Acajutla; in fact, it is a natural lighthouse. For many years past the ejections have chiefly consisted of ashes and calcined stones, for there has been no violent eruption since the year 1789, when a stream of black scoria flowed out, and extended for more than a league about the base of the mountain, visible now at a distance, notwithstanding the great luxuriance of tropical vegetation on each side of it. Two, sometimes three, different vents can be distinguished by the smoke issuing from them, but cannot be approached, owing to the incessant discharges. The ejected matter has, perhaps, never been examined chemically; but sulphur, almost pure, is deposited in many parts. Sal ammoniac, in considerable quantities, is also collected by the Indians of Yzalco, who dispose of it in Sonsonate and Salvador; much could be obtained, were there a greater demand for it. From the proximity of the mountain to the sea, marine salt is probably a component part of the expelled substances; and of pumice there is abundance. The height of the mountain above the sea has not been ascertained with accuracy: from appearance, it cannot be estimated at more than 1,500 or 1,600 feet; but by comparison with adjacent eminences, it seems to have increased within a few years. In the history of volcanos this one can pretend only to a recent date, for according to information, well authenticated in the adjacent towns, its origin does not go further back than between the years 1750 and 1760; but to fix upon the precise period

is not easy, for such accounts of the phenomenon as are current among the people depend principally upon hearsay evidence, and do not quite agree with each other, as to the exact date: the following incident may, however, contribute something towards elucidating it proximatively. In 1834 the writer of these pages was requested to survey some lands not far from the mountains, for the purpose of settling a long pending question about boundaries; this caused him to pass some days at the village of Juayuga, and, as is usual in such cases, several of the oldest inhabitants of the neighbourhood were brought together to give testimony of ancient usages and rights of pasturage. Among these was an aged man, a mulatto, born in the village, and who had passed his whole life within a radius of a few miles around the spot: he was then in perfectly good health, which he had enjoyed throughout his long career, uninterrupted by serious sickness; he was then hale and active enough to employ himself in killing deer and other animals, and even rabbits, with an old gun almost coeval with himself, which was the constant companion of his rambles. In several conversations with this Nestor of the district, he said his age was nearly 100, but he was not certain to a year or two. He never had had the advantage of education, yet his natural faculties seemed good and not much impaired, for he continued to be the oracle and adviser of his neighbours in their rural affairs. He said he perfectly well remembered the time when the ground where the volcano now is first began to burn, as he expressed it, and threw out flames at a place he was well acquainted with, because some of his friends lived in a *hato* (a place for milking cows) close to it, over which the mountain has since risen. On being questioned as to

the accuracy of his recollections, he replied he had no doubts as to the time, for he was then 18 years old, and going to be married to a young woman who lived with her parents in a rancho not far from the hat, and he was continually going there to see her. He strengthened his narrative by mentioning other circumstances of local incident, well authenticated, both in the town of Yzalco and of Sonsonate, which left little doubt of his correctness, at least within a very few years. This story is perhaps not entirely devoid of interest, in relation to the occurrence of so remarkable a geological phenomenon, as it will bring the origin of the volcano of Yzalco nearly to the date of an event similar in almost every particular to that which took place in Mexico in the year 1759—namely, the bursting out of the volcano of Jorullo, of which the Baron de Humboldt has given an interesting description.

The mountain of San Salvador is an immense mass rising from the elevated plain on which the city of the same name stands, and distant from it about three leagues to the north-west; in figure it is much more irregular than those of Guatemala. In some parts the sides are clothed with a thick forest of excellent timber trees; unavailable, because from the many deep ravines into which the slopes are broken, they cannot be got out. Other portions of it are more clear of wood; and there, in many places, even at considerable elevations, the Indians cultivate very good vegetables, particularly cabbages, potatoes, and onions, for the supply of the city Santa Ana, and other towns. There is no water for irrigation; yet the soil, which is remarkably rich, receives amply sufficient moisture, deposited from the atmosphere. This great mound is separated from the ridge of moun-

tains, running parallel to the coast, by a narrow ravine, with precipitous sides almost perpendicular. Through this difficult pass, rather more than two miles in length, lies the direct road from Sonsonate to San Salvador; going through it is always disagreeable, not unfrequently dangerous, by slips of ground from the sides, that are not uncommon, as well as by a stream of water covering the entire breadth of the passage, or nearly so; and which in the rainy season is so full and rapid as to become intransitable, sometimes for two or three days together: it is then necessary to make a detour by the town of Quesaltepeque, which increases the distance some seven or eight leagues. The exact elevation of the mountain has not been ascertained; but probably it is 8,000 feet, or a little more, above the sea. At the summit there is a deep crater, the descent of which is hazardous, though perhaps not impracticable: water can be distinguished at the bottom, but as going down would be very fatiguing, and not unattended with danger, few attempts have been made to reach the bottom. There can be no doubt of this having in former time been an active volcano, yet there exists no authentic record of an eruption, and tradition is extremely vague on the subject. At the present day fissures in several places distant from each other, emit sulphurous vapour, combined with steam so hot that the hand cannot be held in it many seconds without being sensible of its scalding temperature. The ascent to the summit is laborious and difficult, too much so to be undertaken merely for the gratification of getting into high places; hence it has rarely been visited, and never for a scientific purpose: it would no doubt amply repay the labour of any person who would attempt it as a geological study.

The mountain of San Vicente is about 15 leagues from the city of San Salvador, in a line nearly south-east ; it rises from a plain not much elevated above the sea, at the extremity of the coast ridge of heights from which it is separated by the interjacent river Jiboa. This is another enormous mass, isolated like the preceding one, of nearly the same elevation, and, like it, has not been an object of investigation ; an ascent to the summit would be laborious owing to the many intersecting deep chasms between projecting eminences. No mention is made in history of eruptions from this mountain, nor does it present so many volcanic indications as that of Salvador. From various parts about the base issue many small streams of water, some of which are colder than the generality, especially that known as the Rio Frio ; others are noted for the strong fetid odour they emit.

The mountain of San Miguel rises from low level ground almost midway between the river Lempa and point Chiquirin ; it is of an irregular figure, having a base of several leagues in circumference. Though not of great elevation, it is an imposing object, standing alone on a plain of many leagues in extent, and being distant from other eminences ; the absolute height is not much more than 5,000 feet, but cannot be stated correctly, for the reasons already assigned in other cases. That there have been numerous eruptions from this, is clearly manifested by divers large beds of scoria in many places, apparently of very different epochs. This substance is extremely hard, ponderous, full of cavities, and, when struck by another hard body, gives a metallic sound. It is not entirely useless, as it forms a good solid foundation for walls of houses, and has been so employed in modern buildings at San Miguel and adjacent places : it might also

be turned to good account in making roads. Although there are sufficient indications of distinct discharges from the interior of the mountain having taken place, no account of the periods, or of injury caused thereby, has been preserved; but an opinion is generally current among the people of the surrounding district, of its being periodically subject to volcanic movement, at intervals of about twenty-five years; none, however, of serious violence have occurred within modern dates. All these mountains being distinguishable many miles off at sea, they are good leading marks for the different ports in the State, for ships making the land from whatever direction.

Until 1836 the State was divided into four districts, named from the chief towns—viz., San Miguel, San Vicente, San Salvador, and Santa Ana, sometimes also called Sonsonate. In that year, by a Decree of the Federal Congress, a portion, to be comprehended within a radius of four leagues on each of the cardinal parts from the city of San Salvador as a centre, was ordered to be surveyed for the purpose of forming a Federal District, of which the city was to be the capital, as well as of the Republic. While the survey was in progress an alteration in the proposed extent was made, which carried it by the volcano of San Vicente, partly included therein, and thence to the river Lempa, that became the boundary in that direction down to the sea; and thence along the coast so as to bring the port of Libertad within the district. In the year 1839 the Federal Congress was extinguished by its own act, which declared each State sovereign and independent of the others. By this change the Federal District was again absorbed in the State, and a slight modification was made in some of the interior

divisions ; but as this repartition may be only temporary, the object of this sketch will be answered by reciting what it was in 1836.

Of the four departments, the respective cabeceras, or principal towns, are San Miguel, San Vicente, San Salvador, and Santa Ana, or else Sonsonate. Besides these there are other large towns, as Cojutepeque, Sacatecoluca, Nunualco, Olocuilta, Apastepeque, Chalatenanga, Ahuachapam, Yzalco, Nahuialco, &c. &c., each containing a considerable population, but from the want of local census the numbers cannot be stated correctly : some of them, however, have from 6,000 to 9,000, perhaps 10,000 inhabitants in and around them.

It has been already said this is the most thickly peopled of all the States, in proportion to extent : it contains four cities, six principal towns, 142 others, and 62 villages, so situated that the general population is distributed over all parts with a pretty fair equality. San Salvador and San Miguel are ancient cities—the first founded in 1528, the other in 1530 ; San Vicente appears to have been settled by Spaniards about 1638 ; the port of Acajutla was visited by Pedro de Alvarado in 1534 ; and it is not improbable that Sonsonate can date its origin about the same period, because in very early times Acajutla became the chief trading point between this territory and the Spanish possessions to the southward, as well as with Acapulco and other ports of Mexico. San Salvador, in latitude $13^{\circ} 44'$ North, and longitude $89^{\circ} 8'$ West of Greenwich, is the capital of the State, the seat of its Government, and the residence of a bishop ; as a diocese, comprehending the whole State, suffragan to the archbishopric of Guatemala, was erected by Pontifical Bull, dated September 28, 1842, and the first bishop was

installed in August of the following year. The city, estimated to contain 20,000 inhabitants, is, in its modern condition, tolerably well built, having the usual number of public edifices, and many good private houses; but not being distinguished by any features remarkable either for refined taste or particular elegance, a minute description of it would be more tedious than interesting: for the same reason, nothing further need be said of San Miguel, San Vicente, and others.

In some respects the State of Salvador differs from the others. In the first place, there is but little unappropriated land in it, nearly the whole being the property of individuals, divided into upwards of 400 possessions of different extent, many of them very large. In the next place, the people are active, intelligent—naturally, not by education; they are industrious; certainly the best cultivators in Central America; and, under favourable circumstances, that is, in periods of tranquillity, can find abundant employment for their labour. The growth of jiquilite, the native name of the indigo plant, is general in all parts of the State; and in the districts of Sacatecoluca and San Miguel almost the exclusive one: besides this, the cultivation of maize, frixoles, sugar, coffee, tobacco, cotton, &c., always gives occupation to every one who is willing to work. Some idea may be obtained of the great space of ground that is, or rather used to be, appropriated to jiquilite, by stating that it takes about two cwt. of the green plant to yield eight, ten, or twelve ounces of indigo: on the land most suitable to it, the latter quantity is not often exceeded; yet it is known that in favourable seasons, upon taking the average of five years, upwards of 12,000 serons, of 150 lbs. nett each, have been produced—a quantity which in former times

was valued at upwards of three millions of dollars in the European markets, and which at the present reduced value of the article would reach nearly the half of that amount: the period of this large produce is not further back than about thirty years. The fact cannot be questioned that under the Spanish dominion such quantities were actually made and exported, not merely in some propitious seasons, but for a series of years; nor need it be doubted that equally good results could be again realised, in respect to quantity, were the present circumstances of the State to take a more favourable turn.

With the advantages of position, which afford these points for the embarkation of its produce, Salvador possesses within itself sufficient means to become flourishing and prosperous. Its condition, however, at the present time, is the reverse of this, for few parts of Central America have suffered more from the devastating effects of civil discord. Broad tracks of land have been thrown out of cultivation; some valuable estates have been almost ruined, many entirely so; the buildings, tanks for the manufacture of indigo, and other appurtenances, have been dilapidated, or maliciously destroyed by the blind fury of party spirit, or suffered to decay, owing to the insecurity consequent to contests so destructive, for at one period war was directed as much against property as against persons: many proprietors have become unable to turn their estates to good account, from the want of capital for working them on so large and profitable a scale as formerly. Notwithstanding these severe misfortunes, a few years of uninterrupted peace would enable the State to rise from its depression; and with the exertions of a sensible and prudent Government on the one part, determined to respect and protect

private property ; and, with the exertions of owners on the other part, it might again reach a high degree of prosperity.

The chief source of wealth to Salvador, always hitherto has been indigo ; the cultivation of this, so far as the preparation of the land is concerned, does not require a very great outlay of money—the wages of labourers and workpeople at the crop season, and the feeding them at that period, being the principal charge : of implements but few are required, but on large estates a strong force of mules for carrying is requisite. The common practice is to commence in February by cutting down the brushwood and undergrowth with machetes, with which every labourer supplies himself ; after a few days drying, this is burnt : a slight ploughing, such as before described, once in three years, is desirable, though not always given ; for frequently without this previous work, the seed is thrown on, always by hand, about the middle of April, a little before the commencement of the rainy season ; it soon springs up, and the growth is so rapid, that by the end of July, or beginning of August, the plant has attained the height of five or six feet, and is fit for cutting : an intermediate cleaning from weeds with the machete is usually necessary. No system of measuring is ever resorted to, though undoubtedly it would be beneficial, and it is also probable that improved methods of husbandry could be introduced. On land fresh sown, the product of the first year is but moderate ; the quality, however, is good : the strength of the crop is in the second year. The technical distinction of these is “*tinta nueva*” and “*retoño*.” The third year is also “*retoño*,” but seldom so abundant as in the second. Experienced cultivators manage to have a portion of each description in each

season. After the cutting, the stems and roots remain without signs of vegetation until the early part of the following year when they shoot out again. The "*retoño*" being the most advanced, is first ready for cutting, as the "*tinta nueva*" seldom reaches the proper state before September. The manufacture of the indigo is carried on daily until the whole crop is got in, and by the end of October, or beginning of November, the produce is fit for market.

The quality of the soil throughout the State of Salvador is in most parts good, in some particularly rich, and suitable to the cultivation of all tropical productions; wheat grows moderately well only in a few places, nor is there such an abundance or variety of fruits as in Guatemala: yet there is no deficiency of some of the most useful and agreeable, as pine apples, oranges, lemons, and various species of plantains, nor of the usual culinary vegetables; but as the latter seem not to be held in much estimation, nor the culture of them well attended to, the supply is not very great. Frixoles, of which there are many varieties, and being a favourite aliment with the people of all grades, are the general substitute for esculents.

Cattle is abundant and of a fine race; the meat is consequently of a good quality: but from the great heat, what is used fresh must be consumed on the day the animal is killed. An European finds it sometimes hard and less juicy than that he has been accustomed to in his own country: this, however, is not an objection of much importance with the natives. Sheep are scarce; the few seen here and there do not appear to thrive well, hence the breed is neglected: the heat of the climate may possibly be adverse to this class of live stock, or,

what is quite as probable, the management of it is not well understood. Hogs, fowls, and turkeys are numerous in every town and village: consequently sufficiently cheap. Ducks and geese are seldom met with; indeed the latter are scarcely known in any part of the country.

The produce of the dairy is limited to cheese of a very ordinary quality, of which large quantities are consumed; but during the milking season, that is to say, so long only as the periodical rains last, a very rich and excellent cream-cheese is made on some estates where the pasture is fine, particularly toward the sea coast: this is highly and deservedly esteemed, so long as it is in perfection; yet, from some defect in management, it does not keep good beyond two or three months. The making of butter is but little practised; it is therefore seldom to be had, and still more rarely good. The general management of this department of the farm is the worst that could possibly be adopted, while cleanliness in the manipulation and utensils, so essentially requisite in a hot climate, is most woefully neglected—a circumstance by itself sufficient to account for the inferiority of the articles produced. It is rather surprising that better methods, employed in other countries in these processes, should not in the space of three centuries have found their way to this; for, with fine cattle and good pasturage, what besides good management is required for obtaining these things of a fair quality at least, even if excellence should not be aimed at? It has been demonstrated in one or two instances, by foreigners resident in the country, that nothing more than ordinary care and attention is really wanted: but the examples practically given had no imitators; perhaps from the reluctance, more than anything

else, felt by a people accustomed to the peculiar habits of their progenitors for long ages, to abandon them, and employ others recommended by strangers, whom they imagine to be less competent to discover what is suitable to the country than themselves: though much can be said against the absurdity of persisting in methods ill adapted to obtain the end designed. The simple, uncultivated people of this country, (to whom instruction in every useful art has been denied,) are not much in fault, if little or no improvement be perceptible among them; nor can it be denied that a similar adherence to antiquated habit is often enough observable in most regions, if not in every one; indeed, all over the world great tenacity of opinion in favour of forefather customs still exists in rural populations.

The chief, in fact almost the only article of export from Salvador, is indigo; that this might again be rendered as important a one in point of quantity as it formerly was, or more so, can scarcely be questioned, even with the present reduced means of the country. The mere absence of civil broils, with the protection and security that should be given by a moderately prudent Government, would effect this after the lapse of a few years. Then other sources of prosperity could be opened by the introduction of new branches of agriculture, or by more carefully pursuing such as were known and practised with fair success in former times. Among the latter may be enumerated sugar, cacao, and tobacco. Previous to the independence, and for a short time subsequently, the first was raised in sufficient quantity to supply the consumption of the State, to furnish a large portion to Guatemala, and leave a considerable surplus for exportation to Peru and Chile; but the cultivation, from various unfortunate causes, is now

immensely reduced.* Cacao and tobacco were grown principally for home consumption, though some of the latter was occasionally sent to Mexico when under the Spanish dominion. In recent years the falling off in the productions of these articles has been very great; that of cacao is all but abandoned; indeed it had much declined some time before the independence. A striking instance of this may be cited in the neighbourhood of Sonsonate, where anciently there were extensive and valuable plantations, which in late years have been allowed to go so much to decay, that arrobas (25 lbs.) are now collected with difficulty, where tons used to be gathered. Tobacco, yielding collectively in all the States a net revenue to the Government of more than half a million dollars annually, was always a royal monopoly throughout the country, and continued to be so restricted by the modern Governments, after separation from the mother country; but the method of administration and collection of this impost having undergone many changes, the productiveness of it is seriously diminished, though the consumption has by no means decreased. This deficit may be attributed to several causes, but particularly to two—irregularity of management, and increased clandestine cultivation. Under the old regime a general system was prescribed, and scrupulously adhered to, which prohibited all persons from raising tobacco except such as obtained licence to do

* 1849.—Sugar and rapadura (candy) have much increased in production, and the distilling of rum to an extraordinary extent, in the neighbourhood of Sonsonate, by the opening of the Californian market. Vessels find now at Acajutla an ample supply of these articles ready packed for mule carriage; and the rum in small fourteen and fifteen-gallon casks, and grey beards of from three to six gallons, suitable for easy transport at the diggings or places in the gold region.

so from the superior authorities ; and who, as one of the conditions attached to the permission, were bound to deliver the entire crop, after being properly dried and prepared, into the Government factories, at a stipulated rate per pound : it was afterwards retailed to the community at a fixed price in every town ; thus yielding in the aggregate the amount of revenue before stated. Latterly each State has passed its laws for regulating this branch of the public income. These have neither been uniform nor permanent ; while the price to the consumer, not being kept at the same standard in each, has given rise to much smuggling between them ; for being cultivated in all the States, the utmost vigilance of the authorities, with as many restrictions as they can impose, is not sufficient to impede the illegal transit. When it is sold at six reals a pound in one, and at four reals in another, it will find its way from the cheapest to the dearest mart in spite of all formalities ; the revenue of each Government is consequently defrauded to such an extent, that probably the present aggregate does not reach much above one-half of what used to be collected. The tobacco of Central America is reckoned of superior quality, yet none is sent to a foreign market. Were the Government to remove some existing prohibitions, and encourage a wider cultivation for commercial purposes, a quantity large enough to make it a profitable object of exportation might easily be raised. That grown in the vicinity of Ystepeque and Tepetetan in Salvador, Gracias in Honduras, and Gualan in Guatemala, is considered the best, and esteemed as little, if at all, inferior to the generality of that of Cuba.

Coffee is another article that might become of agricultural importance to Salvador : there are many localities, both in the interior and on the coast, well adapted to it :

about Ahuachapam, Santa Ana, and Sonsonate, near San Salvador and San Vicente, the soil is quite suitable. In the first three places it grows kindly, and there are some thriving plantations that yield fruit of good quality; but the home consumption being small as yet, though gradually increasing, they are not looked to as a source of much profit, because there are few opportunities of disposing of a whole crop immediately. A stimulus is wanting, which would soon be found were a few proprietors induced to contemplate the production as a remunerating employment of capital, and be persuaded to undertake it on a large scale of exportation. Others would then imitate the example, according to their means of outlay; and many of the Indian towns, where the inhabitants now cultivate the lands for the general benefit of their inhabitants, in grain or other articles for common use, might, after a little while, by granting them some little favour in the beginning, be encouraged to become coffee growers. The plant is common enough among them for its character to be understood very well, though they are not aware of the good account it could be turned to; but, after seeing that advantage might be derived, they would not be backward in seeking an opportunity to participate in it. The Indian population has hitherto been a neglected race. Few or no efforts have been made to raise it from its depressed condition, or to direct its labours to anything beyond the customary occupations. If some measures were adopted to excite it to this species of industry, the resources of the State would be greatly augmented, and at the same time the welfare of a useful class be increased. The three ports of La Union, Libertad, and Acajutla, are situated so as to present convenient points of embarkation from the different

departments, without incurring excessive expense for land carriage, which could be gradually diminished by giving attention to the improvement of the roads.

About Sonsonate, San Miguel, and in some other parts near the coast, cotton of a very fair quality is grown, but only in a small way for home use: if this cultivation were pursued upon a commensurate scale, it would afford a much greater profit by exporting it.

The mineral productions of the State have been considerable: gold was heretofore, and still is extracted; many rich silver mines were formerly worked, and at the present day there are a few that continue to be so, though comparatively with less success, because neither an equal proportion of skill nor amount of capital can now be employed upon them from the want of both. The causes which have injured other branches of industry, have thrown a still greater torpor over this; but in all probability it would be removed were the unpropitious circumstances that have so long deranged the whole community to cease, for there is no reason to suppose the ores exhausted. In fact it is well known they are not: but for many years past, no one has wished to be thought rich enough to work a mine, least he should be called upon to pay exorbitant contributions to the exigencies of the State, in carrying on intestine wars, as impolitic as destructive. Besides the noble metals, copper and lead exist in different parts; but so long as the former were obtained in abundance, these remained unnoticed, although the price of imported copper always was, and still is, enormously high; boilers for the manufacture of sugar, made from Chilian or Peruvian copper, when brought hither, having frequently sold at the rate of a dollar a pound. Near the town of Metapam a very excellent iron ore is obtained, which

used to keep two or three small smelting furnaces at work, making together about 1,500 quintals a year: this certainly was not much, but had the business been actively pursued, there was a great scope for extension, as the mineral is abundant. Were these mines wrought on a larger scale, and by more perfect processes, there can scarcely be a doubt but the speculation would turn out a profitable one, as all foreign iron sells at a high price; but to do so effectively, more science in this department of the metallurgic art, and better machinery than that which has hitherto been employed, must be introduced. The metal bears a high character in the country, and is found to be superior to that generally imported for making axes and other heavy cutting instruments in common use. Probably this opinion is not altogether erroneous, for specimens sent, some years since, to Europe, to be experimented upon, were reported to be a valuable species for converting into fine steel; approaching, in this particular, very nearly to the celebrated wootz of India.

That part of the coast extending from Acajutla to Libertad is emphatically termed the "Balsam Coast," because there only is collected the article known in commerce as the balsam of Peru. The particular district is intermediate to the two ports, and is not large, as it does not reach either of them within three or four leagues. Lying to the seaward of a low lateral ridge of mountains, the whole tract, excepting a few parts on the borders of the ocean, is so much broken up by spurs and branches thrown off from the main eminence, and so thickly covered by forest, as to be nearly impassable to a traveller on horseback; from this cause it is so rarely visited, that very few residents, either of Sonsonate or Salvador, have ever entered it. Within this space are situated some five or

six villages inhabited solely by Indians, who are so jealous of their possessions, that they will not suffer any of a different race to live among them. They cultivate so little ground for maize, frixoles, plantains, and other necessities for subsistence, besides a very small quantity of cacao, that they are not unfrequently forced to purchase these articles from adjoining parts. They have their own municipalities and chief men; governing themselves pretty much as they please; being in fact almost independent of every other authority. In some of the villages there is a church, but in no one a resident curate, who, when his ministry is deemed indispensable, on festivals or some few other occasions, is attentively conveyed by them to and fro from Guayacoma or Ateas, to which curacies they nominally are dependent. Strictly speaking, they hold no other intercourse with other towns than what is necessary for carrying on their peculiar traffic.

They support themselves by the produce of the balsam trees, and cutting cedar timber, of which they furnish large quantities, in plank and scantling, to Sonsonate and San Salvador, for building purposes and carpentry, with occasionally some pieces of more valuable wood fit for cabinet work. Their chief wealth is the balsam, of which they take to market from 15,000 to 20,000 lbs. weight annually, yielding from 4,700 to 6,300 dollars; it is sold in small portions at a time in the before-mentioned towns, to persons who purchase for exportation. The trees yielding this commodity are very numerous on this privileged spot, and apparently limited to it; for in other parts of the coast, seemingly identical in soil and climate, rarely an individual of the species is here and there met with. The balsam is extracted by making an incision in the tree, whence it gradually exudes,

and is absorbed by pieces of cotton rags inserted for the purpose. These, when thoroughly saturated, are replaced by others, which, as they are removed, are thrown into boiling water. The heat detaches it from the cotton, and the valuable liquor being of less gravity than the water, floats on the top, is skimmed off, and put in calabashes for sale. The wood of the tree is of close grain, handsomely veined, nearly of a mahogany colour, but redder; it retains for a long time an agreeable fragrant odour, and takes a fine polish. It would be excellent for cabinet-makers, but is seldom to be obtained, as the trees are never felled until by age or accidental decay all their precious sap is exhausted. This balsam was long erroneously supposed to be a production of Southern America; for in the early periods of the Spanish dominion, and by the commercial regulations then existing relative to the fruits of this coast, it was usually sent by the merchants here to Callao, and being thence transmitted to Spain, it there received the name of the balsam of Peru, being deemed indigenous to that region. The real place of its origin was known only to a few mercantile men.

In looking to the natural resources of Salvador, either as they now are, or as they will most probably be developed in time to come,—to the proportionably ample population, the industry of the inhabitants, and the facilities for exportation, there will be no error in asserting that when it shall again be able to pursue its agriculture in a steady and improving course, unchecked by the discord and contentions which have so grievously exhausted it, in a period not far remote it may regain not only its former prosperity, but also obtain an immense increase; and become, in reality, as opulent, in comparison with its size, as the most favoured State of the modern Republics.

THE STATE OF HONDURAS

is bounded on the north and east by the Caribbean Sea and Mosquitia ; on the west by Guatemala ; on the south by Salvador ; and on the south-east by the territory of Mosquitia and Nicaragua. It contains an ample space of about 3,680 square geographical leagues ; therefore, in point of size, is second to Guatemala, and like it, extends across the continent from sea to sea, reaching in the south-easterly direction to the Bay of Conchagua on the Pacific Ocean.

The general aspect of Honduras is that of abruptness and irregularity, from its being crossed by many ranges of mountains, some running from nearly north-west to south-east, and others diverging obliquely from these in a different direction ; but none exceed a moderate elevation relatively to other parts of the country. Between these ranges there are numerous valleys of the richest soil, collectively giving a character of fertility to the State. The climate, taken altogether, is extremely good and salubrious, especially in the interior parts ; but it inclines to a temperature rather high. This is particularly the case towards the northern coast, and also in that portion which reaches to the Pacific. Still, from the frequent alternation of mountain and valley, there is so great a variety, that many regions of an agreeable mildness are met with. The least healthy parts are peculiar to the north coast ; that is, from the river Motagua to Cape Honduras—a tract for long ages proverbially deemed uncongenial to exotic constitutions ; but this malignant influence extends to the distance of a few leagues only inland. The same observation is applicable to the coast bordering the Bay

of Conchagua, where the land is low and usually inundated at spring tides for nearly half a league inwards: the mud thus deposited, operated upon by great heat, often 120 degrees of Fahrenheit, produces miasma, clouds of mosquitoes, sand flies, and almost every other description of annoying animalculæ, which, together with a very rank vegetation, concealing numerous noisome reptiles, render that peculiar locality almost insupportable. There also the prejudicial influence has but a limited range, for the town of Choluteca, situated upon a low hot plain, close to the large river of the same name, is found to be little exposed to the effects of the malaria, although only two leagues from the bay; while the town of Corpus, four leagues from the former, and seated among mountains almost 2,000 feet above the sea, is remarkably healthy.

The departmental divisions of Honduras are seven: namely, Comayagua, nearly in the centre, extending southward to the boundary of Salvador. Santa Barbara, north-west of Comayagua, reaches to the Caribbean Sea, between the river Motagua and Puerto de Sal, comprehending the port of Omoa, and as far as the range of the Copan mountains that separate it from Guatemala. Gracias, on the west, also extending to the confines of Guatemala, and to the river Lempa, which divides it from Salvador. Yoro, north and north-east of Comayagua, has a range of sea coast from Puerto de Sal as far as Cape Honduras, including the port of Truxillo. Choluteca lies southerly from Comayagua down to the Bay of Conchagua, and easterly as far as the department of Segovia, in the State of Nicaragua; it has the newly established port of San Lorenzo, giving the State a port of entry on the Pacific. Tegucigalpa is eastward from Comayagua, touching Yoro on the north, and Choluteca

on the south. Juticalpa, north-eastward of Tegucigalpa, is bounded southerly by Segovia, in the opposite direction by Yoro; and ranges eastward to the lands of Indian tribes nominally belonging to it. All these departments are named from their respective chief towns, and Comayagua in latitude $14^{\circ} 15'$ North, and longitude $87^{\circ} 20'$ West, not very accurately ascertained, is the capital of the State, and the episcopal city of the Bishop of Comayagua, whose diocese is co-extensive with the State.

The departments of Comayagua, Gracias, and Tegucigalpa contain about one-half of all the towns in the State, Gracias having nearly as many as the two others. In that of Santa Barbara the river Chamelicon traverses a tract of land exceeding 110 miles in length by half as much in breadth, say more than 600 square leagues, chiefly covered by thick forests abounding in fine timber, such as mahogany, cedar, mora, (a species of fustic,) with many other sorts that would prove very valuable could it be got out with facility; but at present it can be turned to little account, because the whole of this extensive range is almost destitute of inhabitants. Yoro has a still more widely spread space of woodland, containing immense quantities of timber of the same descriptions. The less wooded part of the soil is extremely rich, but very little of it is cultivated, owing to the great deficiency of population; the whole department, large as it is, containing but eight towns besides Truxillo; and of these, five are inland, near the boundaries of Comayagua and Tegucigalpa. Between Cape Omoa and Cape Honduras the only town on the coast is Truxillo. In the department of Juticalpa there are no more than seventeen towns and villages upon a region of vast extent: of course the proportion of it under any kind of culture is very

trifling, and limited to the immediate vicinity of the towns, generally at considerable distances from each other ; the rest, with few exceptions, may be considered waste land. By far the greater part of the population of the State is distributed over four of the departments ; that is to say, Comayagua, Gracias, Tegucigalpa, and Choluteca ; which, enumerated at what has been already stated, would give to these departments, perhaps, about 100 inhabitants to the square league ; but applied to the territorial extent of the seven divisions, there would be no more than between 50 and 60 assignable to each league.

The largest rivers of Honduras are the Chamelicon, the Ulua, and the Aguan, sometimes called the Roman,* descending to the Caribbean Sea. The Chamelicon, rising near the mountains of Merendon, in something more than 14° of North latitude, and between 88° and 89° of West longitude, runs at first through an uninhabited country with a course nearly north-east, then inclines to the eastward, then finally altering its direction to north, nearly, reaches the sea a little to the eastward of port Caballos. The Ulua is much more important than the preceding, both from the extent of country watered by it and from flowing through the more populous districts of the State. It has several branches, the largest of which rises in the department of Gracias, near the boundary of Salvador, where it is called the Higuito. After receiving several tributaries in a north-easterly course, it passes not far from the town of Gracias, where it is called the Talgua : running then to the eastward, nearly as far as the town of Santa Barbara, where the

* The west side of which is considered the boundary of the State, the eastern side being that of Mosquitia.

name is changed to La Venta. Here it is increased by another stream called the Santa Barbara, whence, passing to the north-eastward, it is joined by a large branch, the Sulaco, descending with a south-easterly course from the mountains near Tegucigalpa. The Sulaco receives an affluent, the Umulla, coming northerly from beyond the city of Comayagua, and, thus, augmented, falls into the Venta, at a point not far distant from the town of Santiago, whence the united rivers, now designated as the Ulua, run northerly to the sea near Puerto de Sal. The length of this river from the source of the Higuito, taken through its various windings, cannot be much less than 300 miles, yet, unfortunately, only the lower part of it is at all navigable: yet, if the circumstances and traffic of the State were such as to warrant the undertaking, it could be rendered extensively useful, for where there is plenty of water and a sufficiency of money, internal navigation can almost always be obtained. The Aguan, or Roman, has its source near the town of Yoro; being increased by numerous streams of lesser note, after a devious course of more than 100 miles, it discharges into the sea through two mouths, about 20 miles eastward of Cape Honduras, the Punta de Castilla of the Spanish maps.

Honduras does not at present, indeed never has furnished for exportation, any staple commodity of agricultural produce: it always was, and still is, the principal mining district of Central America; to which occupation the inhabitants appear to have dedicated themselves in preference to all others: hence the cultivation of the superficies was no further attended to than for supplying what was indispensable for subsistence. It is quite certain that in former times large quantities of the noble metals were extracted from the bowels of the earth, nor is it

doubtful that a great amount of them could yet be obtained. In the present day, though such pursuits are carried on, and in few instances profitably, still they languish, and are but miniature efforts compared with the activity and enterprise that once used to direct them. There is no difficulty in discovering the true cause of this retrocession ; it is the same already spoken of as having afflicted the country with so many disasters, and retarded its onward progress for more than the last quarter of a century. Many extensive workings, well known from the richness of their yieldings, were relinquished ; at first, because the product obtained exposed the owners to insecurity and arbitrary exactions ; subsequently, through insufficiency of means to continue them, or the scarcity of labourers, the men being drafted off by military conscription. Hence resulted the usual consequences of neglect, the decay of timbering and falling in of ground in some places, and the filling up with water in others, so that it would now require a great outlay of money for restoring them again to a working condition. Many veins with unmistakeable indications of rich ore have been discovered from time to time, but similar reasons prevent their being wrought ; and until the security of working property be faithfully guaranteed, by change of circumstances and legislative provisions, they will remain unexplored, or be wrought superficially only. Gold is frequently found combined with several of the silver ores, sometimes in metaliferous veins running through quartzose rocks, in alluvial soil deposited in ravines between mountains, and in the sands of many rivers, especially the Guayape, in the department of Juticalpa, where it is collected in grains, not by any formal process, but simply by washing, as practised in a small way by a few Indians

dwelling in that part, who are very tenacious of this property, and will not suffer others to participate in it. The gold is considered the purest of any obtained in the State. Lead and copper are found in a variety of combinations ; of the latter some rich lodes are found that yield the metal in a great degree of purity, and might be worked with advantage to speculators under careful management. Hitherto little, in fact no attention, has been bestowed in this country upon the inferior metals ; they have not been deemed of sufficient interest, but probably the time is not far remote when different views will be entertained respecting them ; and should they attract the notice they deserve in a commercial view, an ample field to enterprise may be laid open. Silver may be said to be distributed almost profusely in the departments ; but not to speak too much in generalities, many old mines, as well as others in modern working, may be mentioned at Yuscaran, San Antonio, Ojajona, Santa Lucia, Cedros, and Cantaranas, all in Tegucigalpa, where such pursuits are carried on with more activity than in the other departments. In that of Choluteca are the old mines of Corpus, formerly very productive both of gold and silver. In the same vicinity there is copper ; and although the first-named have been long neglected, there is not sufficient evidence to presume that they are exhausted, while the same range of mountains indicates many chances of new veins being discovered. Comayagua and Yoro possess some mines, which, even in the present mode of working, give tolerably good returns of both metals ; besides these there are others well ascertained, but not yet effectively opened. Santa Barbara and Gracias have several of undoubted richness, sufficiently demonstrated by the partial operations hitherto carried on, and clearly

hold out the prospect of ample reward to more extended and efficient enterprise. In the last-mentioned department, veins containing fine opals have been long known, and recent discovery has brought to light new ones still more abundant; likewise some affording emeralds, besides others of asbestos and cinnabar. In others, again, various stones, supposed to be of value, have been met with; but the inexperience of the discoverers has not yet assigned the proper classification.

On the north coast, in the departments of Santa Barbara and Yoro, each abounding with mahogany, cedar, and other fine trees, as well as dye-woods, some benefit has been derived latterly, and many shiploads of mahogany are now cut on the banks of the Chamelicon and Ulua, for exportation.

Choluteca, Comayagua, and Yoro are notable for breeds of fine cattle, in great numbers; more particularly Yoro, where, for scores of leagues in every direction from Olancho, vast herds range over lands otherwise unoccupied. This description of property does not afford much revenue to the owners, the price of the animals slaughtered for consumption being low; and, although some are exported alive from Omoa and Truxillo, the number shipped annually is not great. It does not appear that at any period the experiment of salting beef for exportation to the West India Islands has been made here. Probably the want of good salt, proper for the purpose, and also of persons experienced in the practice of killing and preparing the meat, may be assigned as one cause of the omission. The high temperature of the climate may perhaps be alleged as another. This is certainly entitled to consideration, and might require the adoption of some counteracting process; but it can scarcely be looked

upon as an insurmountable impediment; and where an article exists in abundance, far beyond the demand for consumption, it becomes a matter of interest to devise some profitable means for getting rid of the surplus. But possibly, the strongest reason of all may be found in the *vis inertiae* peculiar to the country—an unwillingness to depart from routine, with its concomitant contempt for other methods; not unfrequently creating an indifference even to gain, if it is not to be obtained without increased exertion. With the object of turning cattle to better account in view, the speculation is worthy of a trial; at first it might be made to the extent of a few barrels only, so that if a failure ensued, the loss would not be great. At the commencement, if some miscarriage ensue, it should not discourage the attempt, as more experience or better management would soon show how defects were to be remedied, while perseverance would be likely to open the way to success. If salt be the desideratum, that of a suitable quality could be readily obtained from Turk's Islands, a little to the northward of St. Domingo, whence the North Americans import large quantities for curing meat; and if applied to the same purpose in Honduras, the Government should allow it to enter free of all duty, in order to encourage that branch of trade. There could be no difficulty in getting a few men competent to superintend the details of the business, as well as some coopers to make casks suitable for packing the meat. Materials for these are to be found in every part of the country, and the manufacture of them would be the means of introducing a useful art, entirely unknown at present in the State. If the cattle were driven from the interior to such of the elevated parts near the coast, where there is a consider-

able reduction of temperature at the season of the year most convenient for salting, the expense of conveyance to the points of embarkation would be much diminished. Tassajo, that is beef cut into strips, slightly salted and dried in the sun, has before now been exported from Granada, on the Lake of Nicaragua, to Cuba, with advantage to the speculators. The ports of Honduras would be much more convenient for carrying on such a trade. And certainly the meat, if even moderately well cured and put up in barrels, would be a more marketable commodity, as being less exposed to decay than tassajo. It is not intended by these remarks to suppose it could compete in quality with that prepared in the United States, though it might be afforded at a cheaper rate, and leave a fair profit to those who would engage in the business.

A region abounding in mineral productions, and especially some of the most valuable, excites, generally, the avidity of all classes of the inhabitants to search for them; particularly the latter. Numbers, most usually of those disinclined to any regular or prolonged industry, are continually thus engaged; nor does ill success, nor the consideration that mining labourers are mostly the poorest and hard-worked portion of the community, deter them from the pursuit. Illusory hopes, rarely realised, but never extinguished, still lead them on, and apparently unfit them for devoting themselves to other useful employments. Many will wander from place to place among the mountains, enduring hardship and want, to discover metallic veins; and should one even of value be found, it can seldom be more than an imaginary source of benefit to the finder, who is almost always too impoverished to turn it to advantage. This remark is applicable to a

large proportion of the working population of Honduras: hence agriculture is little attended to, because able-bodied men, at least a great number of them, are more averse to that species of labour than to leading a vagrant life, in expectation of one day or another meeting with a rich godsend: hence it is not easy to find hands fit for it upon an extensive scale. From this cause it is, principally, that although in every one of the departments there is so much land of the best and most fertile description, rural industry may be said to be in its infancy; but infancy so checked and unfostered as to give few indications of attaining an adult growth. Maize, frixoles, some wheat, rice, and plantains are the chief articles of produce; and it is questionable if even these in quantities sufficient for the whole population, unaided by what is drawn from the adjoining States of Nicaragua, Salvador, and Guatemala. An exception to this almost general neglect must be made in favour of Gracias, on account of the tobacco of Copan, which is esteemed equal to the best of the country; but as none is sent to a foreign market, it contributes very little, under present circumstances, to improve the wealth of the State.*

Honduras, possessing an extended territory, but thinly peopled, with a good climate, and having large tracts of land, undeniably of a fertile character, now unappropriated, might derive great advantage from making an effort to increase the amount of population, by inviting and encouraging immigration; for which the ports of Omoa and

* Tobacco has lately been imported into England from Central America, and it is expected, from the quality of it, that it will prove an article of considerable enterprise among the cigar-makers, in competition with the Columbian, which has now such an extensive consumption.

Truxillo are convenient, as they could be reached in a voyage of five or six weeks from almost every part of Europe. A plan prudently conceived, and well carried out by the Government, might in a very few years foment such an influx as would cause progressive activity in the culture of the soil. The benefit hence arising would soon become palpable: much land now unproductive would by degrees be brought into a profitable state of husbandry, and consequently be of greatly augmented value; whereas the natural richness of it only shews, at present, how the bounties of Providence are neglected by man. Communication between the different parts of the State, and also with the adjacent ones, would become more extensive, direct, and easy; and although all difficulties in this particular could not be removed, still means for opening and maintaining it would gradually be brought into existence. Supposing the Government were to originate a system of colonization, the success of such a measure would probably be advanced by granting, in the first instance, suitable concessions of the State lands in favourable localities, and in different parts of the interior; as these would be best adapted to the constitutions of Europeans, until they became well acclimated. Other grants, or sales on moderate and encouraging terms, might afterwards be made in situations not unfavourable to the general health of strangers,—of which there are many in directions approaching nearer the sea ports, so as to have the main roads between these and the capital more populated, and the adjacent lands better cultivated than they now are, with distances of not more than a moderate day's journey from one settlement to another. Locating colonists at first upon the coast, and upon the north most especially, would inevitably be attended with

disaster, and its consequent discouragement. For how fertile soever the land may be in such situations, the immense labour of clearing a moderate extent of thickly wooded ground, the high range of temperature, the exhalations arising, and for a year or two continuing to arise, after breaking up land that has been covered for ages by a rank tropical vegetation, and above all, the peculiarity of climate along the whole of that coast, would, beyond all doubt, prove pernicious to men even of the most robust temperament, on their first arrival from other countries, when exposed to a continuance of only moderate labour; and it should be borne in mind that incessant work will always be the lot of colonists in their early operations. It may be flattering to the expectations of a settler to hold a possession not far removed from a port; a Government also may be solicitous to have the vicinities of its ports well peopled and made productive, from the manifest convenience and advantages these circumstances would confer upon them; but a fair balance should be struck between these utilities and their contraries. All improvement requires time as well as experience, before rapid progress can be expected; therefore it would be better to make a beginning where there are the greatest chances of a favourable issue, than aim at the benefit of one or two particular places, where the experiment might be attended with more serious impediments to its full success. An abortive trial, besides the detriment which usually follows a failure, is apt to excite prejudices, not only against the localities where it has been made, but also against many others where no obnoxious influences exist. On the contrary, if an enterprise should from its commencement hold out no more than tolerably good indications of future prosperity, these will be a powerful

stimulus to persevering exertions; and as increasing experience will be a guide in correcting previous faults, as well as lead to more accurate observations on the effects of climate and alterations of seasons, advancing improvement will be a natural consequence. Should a system of colonization ever be tried in this State, or indeed in any other, where there are so many good reasons for inducing it, an important point for giving effect thereto would be a judicious selection of situations to begin upon: these should be chosen with due regard to the nature of the soil, facilities for clearing it at a moderate expense, and the means for distributing water when irrigation might be requisite; then the introduction of a few hundred of industrious foreign families, previously accustomed to the general business of agriculture, could scarcely fail of producing vast benefit to the State. The necessity of opening internal roads would soon become apparent; means for making them would by degrees be resorted to, because the interests of the whole community would imperatively call for them. These would speedily promote intercourse and create traffic, under the favour of which, in a few years, a bountiful soil would cease to be under the ban of neglect and indolence—the worst of all enemies to a country's happiness.

THE MOSQUITO TERRITORY

is bounded on the west by the Roman river ; the eastern side of which, and half the navigation, is recognised by the English Government as Mosquito territory. By some authorities* Cape Honduras has been laid down as the western boundary ; on the north by the Caribbean Sea ; on the south by Nicaragua ; and on the east by Costa Rica, embracing the mouths of the river San Juan, and as high up that river as the mouth of the river Serapequi.

The natives of this territory have held themselves for centuries past to be independent of all Spanish authority, either ancient or modern ; and have always set up claims to certain limits in the interior, that, from neglect or inaccurate knowledge of the space claimed, are of difficult definition, and in recent times have brought them into disputes with Honduras, Nicaragua, and Costa Rica, without hitherto producing an amicable settlement. If geographically the Mosquito shore be considered part of the above named States, it is perfectly certain that virtually, for the purposes of sovereignty or jurisdiction, the fact is far otherwise ; for neither the one or the other has ever been submitted to by the inhabitants, nor, from the wild and nearly impenetrable state of the country, is it probable that an attempt to enforce these pretensions would be attended with good results, should it at any time be made.

The Mosquito Indians, though not numerous, are an active and a daring race, not unaccustomed to the use of fire-arms, especially those who dwell along the coast. They are also

* Lieutenant Joseph Smith Speer (1765). See *Nautical Magazine*, December 1844, No. 12, page 732.

dexterous boatmen, proud of their independence, and entertain a great antipathy to the Spanish population. For ages past they have considered themselves under, and *have had* the protection of, the English Government; so that they look to that power for aid in case of emergencies. If assailed by land, it is likely, assisted as they would be by the intransitable state of the country, they would be able to sustain themselves against such forces as could be sent to subjugate them; if attacked from the seaward, their activity with their boats would give them a still better chance of success.

In the interior there are many small tribes of Indians, more rude than those of the shore; these, scattered over an immense space, live exempt from all political government: and as this part of the territory may be termed, not inaptly, "*terra incognita*," it is not easy to determine the limits of civilized from savage life. Whatever the productions of this wilderness may be, they are but little known; excepting everywhere immense quantities of fine timber, and sarsaparilla, which is obtained in different localities not far removed from the coast.

On the sea shore great abundance of tortoiseshell, of the best quality, is taken; possibly there may be many other and more valuable products existing: but as nomadic tribes are little addicted to culture of any kind, the natural riches of an extremely fertile tract are not likely to become available through their efforts. Valuable minerals have been represented as abundant in the mountainous ridges intersecting this wild region, but on what authority the assertion rests is not made out satisfactorily; nor, at the same time, are there sufficient grounds for giving it a positive denial; therefore an assertion not disproved may be true. The story has most probably originated with some of the early Spanish writers,

who were not always averse to the marvellous, nor inapt to believe that great riches existed in parts which they had examined only very superficially, or perhaps were wholly unacquainted with: for modern researches in places which have become accessible have proved, in many instances, the character formerly given of them.

The rivers are the Roman, or Aguan (already noticed under Honduras); the Tinto, or Black river; the Wanks and San Juan (described under Nicaragua). The Tinto, or Black river, cannot be very satisfactorily defined, because in the greater part of its course it runs through a tract of country hitherto little explored. The river Wanks is of great length and of considerable volume, rising in the mountains about the town of Segovia, and, passing many leagues nearly along the boundary which divides the department of Segovia and Nicaragua from Honduras, it takes a course about north-easterly, and reaches the sea at Cape Gracias a Dios, where it is generally called the Wanx by the English. As these two rivers run through a region thickly wooded, and unoccupied, except by a few tribes of unreclaimed Indians, their courses and lengths are far from being ascertained with anything like geographical accuracy: perhaps not even with approximate precision. The little information relative to them has been acquired from the very few adventurous individuals who, at long intervals of time, have started from one or other of the Mosquito settlements near the Cape, and, after encountering great hardships and fatigue, have at length reached the scarcely more civilized parts of Juticalpa or Segovia: seeming to confirm the general persuasion, that from the numerous falls, rapids, and other embarrassments, they are nearly useless for the purposes of communicating with the interior by small boats, or even canoes.

THE STATE OF NICARAGUA

extends from the Bay of Conchagua, on the Pacific Ocean, to the Mosquito territory, and comprehends a territory, little more or less than 3,000 square leagues. It is most advantageously situated for the purposes of commerce and agriculture ; in respect of which the great practicable water communication it possesses gives it a decided superiority over all others of Central America. By the river San Juan and Lake of Nicaragua, it is accessible from the Republic of New Granada, the West India Islands, the United States, and Europe. By the Pacific a constant intercourse can be maintained with all the western coast of the American continent, Polynesia, China, the East Indies, and in fact all the world ; advantages which cannot be too highly estimated, and that in coming time may, and most probably will, prove of incalculable benefit. On the north and north-east this State is bounded by Honduras, and the Mosquito territory ; the Bay of Conchagua divides it from Salvador ; south-west it is open to the Pacific ; on the east, and descending from the Lake of Nicaragua, by the right bank of the San Juan, it joins the State of Costa Rica. Interiorly, the territorial divisions are the departments of Leon, Managua, Granada, Nicaragua, and Segovia ; at least such was the repartition until 1838, when a new Constitution of the State, adopted by the Legislature, ordained that the territory should be divided into departments and districts, the number and limits of which were to be regulated by a special law ; but probably this has not yet been enacted, or if so, not carried into effect. The whole population amounts to about 235,000, chiefly located in numerous towns in the direction

of the Pacific coast, and between it and the great Lakes of Nicaragua and Managua, from Realejo to the town of Nicaragua ; whence, to the boundary of Costa Rica, there intervenes a very extensive tract of land, almost entirely destitute of inhabitants. Towards the borders of Honduras, and eastward of the lakes in the district of Segovia, there are but few towns or villages, and those very thinly peopled.

The general features of this territory are various. In proceeding from Realejo southward and westward, there is, at a few leagues distance from the ocean, a range of hills, nowhere of a great height until they approach the confines of Costa Rica, through which they are elevated into mountains of considerable altitude ; that is, from 5,000 to 11,000 feet. Between this ridge and the lakes the land may be termed moderately level, and is not much broken ; the contrary is the case along the borders of Honduras, where the country is intersected by several lofty ridges, running in various directions. In the valleys between these there are many rivers, the largest being that of Segovia, or the Escondido, as it is sometimes called, which falls into Bluefield's Bay. None of them, however, are navigable, in a commercial sense, nor the peculiar characteristics of them much known, owing to the almost unpeopled and wild state of the country through which they run. As in Guatemala and Salvador, so likewise in this State, there are several volcanoes, all towards the sea, standing alone, or but slightly connected with the main ridge, though all of them are nearly in the direction of it. Such are El Viejo and Telica, not far distant from Realejo ; Momotomba, at the northern extremity of the Lake of Managua ; Nindiri, between the towns of Managua and Masaya ; Mombacho, on the

western shore of the Lake of Nicaragua, not far from the city of Granada ; and Omotepe, on the island of that name in the lake. These are not of great elevation, compared with others of this country, Mombacho being nearly 4,500 feet ; Ometepe, 5,100 ; and Momotomba perhaps a little more lofty. The climate of all the State, taken as a whole, may fairly be deemed good and healthy, but is distinguished, as is the case in the others, by much variety. In the interior and mountainous parts the temperature is mild, as compared with the most populous portion of the territory adjacent to the sea coast, where it is hot, and rather approaching to humid, owing to evaporation from the extensive surfaces of the two great lakes ; which, from the combined effects of a powerful sun, and a fresh breeze from the north-east blowing over them almost constantly, must be very great. Both climate and temperature appear to be extremely favourable to the general health of natives as well as foreigners ; the exceptions in this important point being very few, and of trifling consequence in the injury they occasion, being limited to the vicinity of the Bay of Conchagua, where the population is but thinly scattered ; and to the river San Juan, the banks of which are most densely wooded, but where there are no inhabitants at all besides the transient boatmen. The changes of season from wet to dry, take place with the same almost undeviating regularity as in other parts of Central America, but the rains usually continue nearly a month longer here, and the quantity during the season appears to be considerably more copious ; also casual showers, out of the periodical limit, are not unfrequent between the lakes, and the lakes and the sea, affording much benefit to vegetation on the cultivated lands.

The city of Leon, capital of the State, is situated in latitude $12^{\circ} 26'$ North ; and longitude $86^{\circ} 52'$ West of Greenwich. Juarros, in his "History of Guatemala," says that Leon was founded by the Spaniards under Fernando de Cordova, in 1523, on a site not far from the Lake of Managua ; but that some years after, from causes not assigned, a removal took place to the position on which the present city stands. He also says the cathedral church was erected there by Diego Alvarez Osorio, second bishop of the diocese, in 1532 : thence it appears it was one of the earliest foundations of the conquerors in the country. Leon being tolerably well situated with respect to the port of Realejo, flourished progressively, and became a principal mart of commerce up to the period of the Declaration of Independence ; at which time it was noted for opulence, and an extensive trade carried on, both with the Spanish dominions on this continent and with the mother country. At that epoch it seems to have attained its highest point of prosperity, for subsequently wealth and commerce have so much diminished as to leave it now but little more than the shadow of former importance. During the last twenty-five years the city has been greatly injured by military operations repeatedly carried on against it, as well as from several factious revolutionary contests, originating within its own precincts. By these various disasters a considerable portion of the best part of the town has been reduced to heaps of ruins ; while few repairs, or but few restorations, have followed. Many of the wealthy inhabitants, chiefly old Spaniards, emigrated at the commencement of revolutionary troubles, to escape the dangers which threatened their property,—and so far they were fortunate ; while others who could not, or would not, have recourse to that

expedient, have seen their fortunes most grievously diminished, if not altogether destroyed. From these causes, a city once busy and prosperous, has been reduced to insignificance and comparative poverty : nor is there much probability of its being permitted to rise from this depression, until a more tranquil spirit, many important changes, and a generally improved system of public affairs, shall have taken place. Leon as a city contains nothing remarkable, nor anything requiring particular notice : it occupies an extensive space of ground, has many churches besides the Cathedral, which is not a very imposing structure ; also the religious establishments common to other cities of the country—a University and Tridentine College, both very susceptible of amelioration, in regard to professors and mode of instruction. Some of the private dwellings are spacious and substantially built in the old Spanish style, but the majority do not rise much above mediocrity. The wreck of many fine houses now encumbers the ground on which they stood, giving a melancholy example of destruction and desolation ; affording, at the same time, an instructive specimen of the horrors of civil discord. As capital of the State of Nicaragua, Leon is the seat of the State Government and civil authorities, and residence of the bishop, when there is one, but the see has not been filled since the demise of the last diocesan in 1824.* The population of the city and the suburbs cannot be stated with accuracy, from causes already alluded to, when speaking of other towns. Various circumstances lead to a presumption that the numbers have not increased in recent years ; nor is there reason to think they now go beyond 15,000 or 18,000 at most.

* Dr. Viteri, Bishop of San Salvador, was translated to the Bishopric of Leon in 1849.

Granada, situated in $11^{\circ} 55' 49''$ North latitude, and longitude $85^{\circ} 47'$ West of Greenwich, about three-quarters of a mile from the western shore of the Lake of Nicaragua, is one of the oldest cities in Central America, and coeval with Leon; as, according to Juarros, it was founded by Fernando de Cordova in 1523. It occupies a position sufficiently favourable for carrying on an external trade, as there is a constant water communication by large piraguas with the port of San Juan de Nicaragua, or Grey Town, on the Caribbean Sea. As a city it possesses no remarkable peculiarities; the streets are laid out in parallel lines, the principal ones being of ample breadth. There are several churches and convents, all of ancient date; but in no way conspicuous, either for architectural design or beauty. The private houses are all in the old Spanish style, and among them are some spacious and commodious habitations. Altogether, Granada is generally considered by foreigners as having a more agreeable locality than other towns of the State: from its pleasant climate, though occasionally rather warm; a plentiful supply of all the ordinary necessities of life at a cheap rate; and, what is rare in the country, abundance of fish and wild fowl from the lake. The population is estimated at about 10,000. After the two cities, Chinandega and Managua are the largest towns and the most populous, particularly the latter, which is chiefly peopled with Indians of a very industrious character, among whom are some good workmen in the different useful trades; many of them dexterous in imitating foreign productions in their respective branches, when they obtain a model to go by, but displaying nothing of an inventive genius. Nicaragua, sometimes called Rivas de Nicaragua, is inferior to the preceding in extent and

population, but agreeably situated in a fertile district a little more than a league from the lake ; it is on the verge of the inhabited part of the State. In the south-westerly direction far beyond it, in a travelling distance of perhaps fifty leagues, there is hardly a cultivated spot to be met with, until approaching Bagases, in the State of Costa Rica. Segovia and Matagalpa are towns in the eastern division of the State, situated among mountains toward the confines of Honduras. They both had their origin at an early period of the conquest of this part of the country, but never prospered much : the first is the chief place of the department, though in other respects insignificant, from scanty population ; indeed, the whole department in this particular is inferior to all the others.

The roads in this State are not an exception in their general character to those in other parts of the country ; that is to say, they have never been properly formed, nor cared for : however, a distinction may be made in favour of the space between Realejo and Rivas, because the nature of this ground, on which is concentrated nearly three-fourths of the population of the State, opposes but few impediments to an easy transit, as produce and merchandize can be transported from one point to the other in carts without much difficulty. This mode of conveyance is in constant use from Realejo to Leon, and from Leon to Granada, as well as from the latter to the former when great expedition is not required, otherwise mules must be resorted to. Between the places mentioned there are nowhere very abrupt passes, and the distance to be gone over seldom deviates from easy travelling levels. Oxen are employed for draught, consequently the progress is slow. Nor is the construction of the carts at all calculated for celerity of movement : they consist of a few rough beams

and planks, or frequently hurdles, mounted on a strong wooden axle, and pinned together by treenails of hard wood ; the whole vehicle never boasting of a single piece of iron, which is too costly to be so employed. The wheels are always of solid timber, cut from trees of convenient size, and made as nearly circular as axes, with more or less dexterity of workmanship, can accomplish without much trouble ; mathematical nicety in this particular would be deemed a waste of labour. With two yoke of oxen these contrivances can transport a load of twenty or twenty-five hundredweight easily enough : a break-down is no unfrequent occurrence, generally from failure of the axle ; but this is soon remedied, as the drivers are usually provident enough to carry an axe with them : the nearest trees furnish a suitable piece of wood, which being cut and fashioned to the proper dimensions, the damage is repaired, and in a few hours the cart is again on its journey. The rate of travelling in this manner seldom exceeds three or four leagues a day ; but if a little attention were directed to improving the road, and to the construction of a better and more serviceable class of carriages, there are no natural obstacles between Realejo and Granada—a distance of about 50 leagues, to prevent its being rendered as expeditious and commodious as it is in other countries by similar conveyances ; for certainly, on a like distance no part of the country presents equal facilities. Even a railroad could be made, if the traffic should ever become sufficient to warrant such an undertaking.

Nicaragua, as regards soil and fertility, may fairly challenge competition with the most favoured parts of Central America, for most of the purposes of agriculture ; which, with suitable applications, could be carried on extensively and prosperously very far beyond what is

actually the case, for only a small portion of the land can be said to be improved or made use of. One of the principal sources of wealth at present, consists of cattle ; of these there are great numbers in all parts, but most especially in the district known by the name of Chontales, lying on the eastern side of the lakes, and reaching as far as San Miguelito, within a few leagues of the river San Juan—a space containing many hundred square miles, but without towns, and with little more population than is required for attending to the herds. This tract affords admirable pasturage, capable of sustaining a much larger number of animals than it now feeds, which, however, is great ; for besides furnishing what is required for the consumption of the inhabitants of the more populous districts, many thousands are annually driven off to the fairs of San Miguel in Salvador, for the supply of that State, and also of Guatemala. Yet besides the pasturage necessary for these animals, there is still in this district a surplus of excellent land, watered by many streams descending to the lakes, that remains applicable to the growth of other and more valuable products. From a fertility of soil, capable of maintaining millions, little more is now drawn than the sustenance of 250,000 inhabitants ; but when, by increase of population, a greater command of capital, more intelligence of agriculture, commerce, and political economy, which in process of time will creep in, the beneficence of nature shall be looked upon as an excitement to industry, and encouragement be given to raise produce of exportable value and general demand, Nicaragua will be converted into a region of immense wealth. The time may be distant before this can be effected, yet from the amazing strides with which improvement is progressing in almost every part of the

world, it is presumable, even certain, that sooner or later, as the means become patent, it will arrive.

Indigo, Brazil wood, and hides are at present the chief exports of the State ; though it yields sugar, coffee, cacao, and tobacco, which, by enterprise, energy, and capital, might become valuable branches of external trade, instead of furnishing only what is required for home use. Mules, of which the race is a very good one, have sometimes been shipped for Jamaica, but not always with good results ; chiefly owing to defective arrangement in not having vessels ready to take them on board as soon as they reach port San Juan, or Grey Town. Whent his is not the case, many of them die at that place from the want of pasturage and other means of maintenance of which it is destitute, in the event of their being long detained there. Many of these animals are annually sent from Columbia to the West India Islands, where they usually find a good market ; consequently, if necessary precautions were used, this trade could be carried on as easily from San Juan as from the ports of that country. Maize, rice, frixoles, and plantains—standard articles of food for the people, are in the greatest abundance ; consequently very cheap. The last are here found in perfection, both as to size and quality ; affording an excellent aliment, highly esteemed as a substitute for farinaceous substances : they are healthy and nutritious, whether boiled or roasted, or in their natural ripe state. Some wheat is grown in the mountainous and cooler parts about Segovia and Matagalpa, but only in small quantities ; enough, however, for the consumption of the cities, where bread is used only by the better sort of the population, and is by no means considered as the staff of life by the commonalty where maize and plantains abound. Fruits of the country are sufficiently plentiful,

as well as oranges and lemons, which are excellent. Vegetables and garden produce are scarce about Leon, but more abundant at Granada, and other towns in that direction: they might be raised in all parts in great perfection, as both climate and soil are favourable; yet not being considered of so much importance by the natives as by foreigners, that species of culture is not much attended to, except by the Indians of Masaya, for the supply of Granada. The mulberry, for silkworms, (*Morus multicaulis*,) grows remarkably well, and the climate appears to be congenial to it in all respects. Near the town of Diriamba there are some flourishing plantations, and there are numerous other situations equally well adapted to it. Hitherto, little or rather no advantage has attended the cultivation, chiefly from want of attention and requisite experience. Were these deficiencies supplied, and the business carried on with energy and skill, a large quantity of silk could be produced. How profitable such an article of commerce would be to proprietors, needs no demonstration. Of minerals the State is not destitute. Many veins of silver are known to exist in different parts: also some of copper, the ore of which is rich and valuable; but they remain, almost all of them, either unexplored, or only superficially worked; consequently the products obtained from them are not very considerable. There are many situations where gold is said to be found, and doubtless it is occasionally met with, yet there are grounds for being sceptical as to the abundance that common report assigns to it; for the vulgar, when they discover any glittering mineral of a yellow colour, are too apt to be confident that it is the precious metal, and are not easily convinced of the contrary, even after frequent disappointments: still, in a mountainous

district known to contain metalliferous veins, there are many circumstances to favour the belief that in the alluvial soil of deep ravines, and on the borders of mountain streams, deposits of no inconsiderable value have been, and may again be discovered.

At the port of San Juan on the Pacific, in that of Nacascolo adjoining to it, and at some other parts of the adjacent coast, there is found a species of shell fish, of the size and nearly the shape of a large garden snail, which is employed by the Indians of Masaya and other towns for dyeing cotton yarn of a purple colour, from a brilliant clear tint to a deep rich tone,* so permanent as to be little affected by repeated washing, or exposure to the sun or any alkali: the thread thus dyed is used for ornamenting their white cotton dresses, for weaving into cotton bed quilts, and other articles of domestic use. The colouring matter, as obtained from the fish while fresh, is limpid, or nearly so, and is imparted to the thread by a process that only the patient assiduity of the Indians could adopt. They take the material to be dyed to the sea-side, and gather together a number of the shells, which being dried from the sea water, they commence their work by gently pressing the valve, or scale, that closes the orifice of the shell, whence a quantity of fluid exudes: in this each thread is dipped singly, and having absorbed a sufficient quantity of the moisture, is carefully drawn out between the finger and thumb of the left hand, and then laid aside to dry; this is the only operation, in performing which they pass days and nights, until the whole of their work is completed. The first colour the yarn assumes is a dull greenish blue, but after exposure

* Tyrian purple.

to the atmosphere for a certain time, it acquires the desired tone. The fish is not destroyed in this process, for after as much of the fluid is extracted as can be obtained at one time, the shells are thrown apart, and afterwards returned to the sea to be again collected for future service.* The cotton yarn thus dyed is known to the traffic of the country by the name of "*Hilo morado*," and is highly prized by the Indian community of all the States, the women being extremely partial to it for adorning the dresses used on festive occasions: formerly high prices were paid for it, being frequently sold, in Guatemala and other principal towns, at ten, twelve, and fourteen dollars a pound. In recent times purple thread has been imported from Europe, and sold at a much cheaper rate; but the colour is neither so good nor so durable, and, notwithstanding its economy, does not wholly supplant the native. The Indians are not easily deceived by offering them the one for the other, as they can readily distinguish the foreign from the genuine by some peculiarity of smell in the latter, and will always prefer it though much the dearest.

The quantity of indigo produced in the State of Nicaragua is not very great, seldom exceeding 1,000 seroons in the year; the average may be estimated about

* I found this shell-fish on an island off Carretté, in the Gulf of Darien, in great abundance; and its colour is of so durable a nature, that it cannot be discharged by anything less than a chemical preparation. Is not this the same colour as the Tyrians produced? If so, may not Lord Byron have the answer to his Canto xvi., *Don Juan*, stanza x.?

“——Like the old Tyrian vest
Dyed purple, none at present can tell how,
If from a shell-fish or from cochineal.”

G. U. S., MS., 1837.

800: some of it is of a very superior quality, and the generality seldom below the middling. The produce of the estate called Pital, lying about the mountain of Mombacho, and on the borders of the lake, is unequalled by that of any other part of the Republic, and will bear an *advantageous comparison with the finest of any country whatever*. No part of Central America is better suited to a more extended cultivation of this article; for nowhere is the soil or climate better suited to it, nor the means of transport more easy, nor the facilities for exportation greater, either by the Pacific or the Atlantic; yet with all these advantages, few efforts are made to increase the annual growth. The cause of this neglect is mainly attributable, in recent years at least, to a diminution of capital, and possibly, in no small degree, to an apathetic indifference to the future, consequent to the misfortunes arising from a continued series of internal discords that unhappily have paralysed all industrial pursuits. There is, however, an alluring field open, not only for renewing former sources of wealth, by retrieving what has been neglected or abandoned, but also for augmenting them henceforward, by the introduction of various branches of cultivation, to which every circumstance of land, climate, and geographical position, holds out promises of success far from dubious. During the last quarter of a century the decrease of commerce and agriculture has proceeded to an extent both serious and afflicting, and the impoverishment of the State has been commensurate with it; still this disaster, great as it is, is not irreparable, for as the germ of abundance is inherent in the soil, waiting for the industry and enterprise of man to give it development, there is no reason to presume it is condemned to lie buried and unprolific for an interminable period; on the contrary,

some advance towards improvement may rationally be looked for, and when the time shall arrive for amply promoting the kindly growth of it, a dawn of prosperity will spread over the State, the progressive results of which the present race may be unable to contemplate the limit.

The State of Nicaragua is peculiarly distinguished from all others of Central America, and is remarkable in the portion of the American continent north of the Equator, by the suitableness of its geographical position for carrying out the vast and important enterprise of opening a passage for ships between the Atlantic and Pacific Oceans. In discussing at different periods the possibility of effecting this undertaking, various points have been suggested as presenting local features more or less favourable to the project, but the information hitherto acquired seems to fix attention upon three places only : namely, the Isthmus of Panama, the river San Juan de Nicaragua, and the river Goazocoalco, and Bay of Tehuantepeque, in Mexico. The selection of one of these three points is the question of great moment to be decided, and from the data hitherto furnished as to each respectively, Nicaragua appears to advance as prominent a claim as either competitor, if not to stand unrivalled. Much has been adduced by scientific men in favour of Panama ; demonstrations by others of able character are not wanting in behalf of Tehuantepeque ; and the surveys made in Nicaragua are supposed to sustain its pretensions to be full as powerfully as either candidate. Columbia, Central America, and Mexico, each manifesting anxious desires in a cause so momentous to their national interests, are equally called upon to put forth their titles to preference, and lay them before the capitalist and engineering science of Europe, that must ultimately give a decisive judgment as to the possibility of

executing a plan that has for its object the giving of additional means for carrying on the commercial intercourse of three-fourths of the world, and bringing into reality facilities hitherto sketched out in imagination only.

It will be necessary to compare and analyze the merits of each locality, when the means for doing so shall be provided, before any certain plan can be adopted ; but as the documents for the purpose have not yet been collected into one body of evidence, this cannot be done in a satisfactory manner, until more copious information shall have been obtained. The surveys made in Nicaragua, during the years 1837-8, give an opportunity for introducing here the following particulars relative to that one of the competing points which probably will not be deemed uninteresting ; for every aid, small though it be, tending to elucidate an important question, may have its use.

Between the city of Granada and the Port of San Juan de Nicaragua, or Grey Town, on the Caribbean Sea, a trading communication is kept up in all seasons of the year, by the Lake of Nicaragua and the river San Juan. It has long been thought practicable to make use of this route for opening a ship canal between the Atlantic and Pacific Oceans. The idea is of ancient date ; but during the last twenty years public attention has been directed to it much more prominently than at any former period. All considerations of the subject were, however, based upon conjecture, or an imperfect knowledge, either of the watercourses, or the peculiar character of the strip of land lying between the Lake of Nicaragua and the Pacific ; the elevation of the former above the latter was, indeed, known with proximate accuracy ; but the rise of the land, or the summit level of the chain of hills traversing it, were not detailed suffi-

ciently to be of service in calculation. Early in the year 1837, the Supreme Government of Central America ordered surveys to be made of the lake, the river, and the isthmus, separating the port of San Juan del Sur, on the Pacific, from the lake; and it is from the plans of these surveys that the ensuing memoranda have been made.

The Lake of Nicaragua is a fine expanse of water, extending about 90 miles from one extremity to the other; the greatest breadth being about 40, and the mean 30 miles. Near the shores, that is to say about the distance of 100 yards from the beach, there is generally a depth of two fathoms water; in other parts, all the intermediate soundings, between five and fifteen fathoms are found. It is the great reservoir of a very extensive tract of country, receiving the waters of numerous streams descending from the high lands of the interior, especially on the eastern side, where almost every bay and small inlet is distinguished by its river. On the opposite shore these tributaries are fewer, yet there are several, one of which, the river Frio, is a large and powerful current coming from the interior of Costa Rica, and entering the lake opposite the ruined fort San Carlos, not far from the outlet of the San Juan. Wild fowl and excellent fish are abundant in all parts: alligators are numerous, some of them of great size, and mischievous; also, though so far from the sea, sharks of considerable magnitude are by no means uncommon.

Several groups of islets, and some islands, diversify the surface: of the latter, Zapatera, Ometepet, and Madera are the largest, being several miles in circuit. Zapatera is mountainous, rising nearly to 2,000 feet in height, and

uninhabited ; yet some portions of it might be cultivated. Ometepet is inhabited by an industrious race of Indians, who raise maize, &c., and possess some cattle. Here there is the small town of Moyagalpa, with a church and resident curate, who, aided by an Indian municipality, easily manages the whole community, and contrives to keep it in rather an exemplary state of good order and subordination. Madera is joined to Ometepet by a neck of land so low that when a strong breeze sets in from the north-east it is frequently overflowed : in form it is a huge mound of more than 4,000 feet high, everywhere thickly covered with wood, affording a great supply of excellent cedar timber of great dimensions. On Ometepet, or perhaps, more correctly speaking, the whole island itself, is a remarkable mountain, that, viewed from the nearest shore, presents the figure of an almost perfect cone, rising from the surface of the water at an elevation of more than 5,100 feet : unlike the adjacent Madera, it is bare of wood, shewing only a few trees scattered here and there ; but from its symmetrical proportions is a grand and pleasing object, distinguishable by mariners on the Pacific at a great distance. Like most other lofty eminences, a volcanic character is attributed to it by the people of the country, and the Indians assert there is a deep crater on the summit ; this may be fact, for tradition is not altogether silent as to eruptions having taken place, but so vaguely indicated as not to be traceable to periods within historical record. Solentiname and Sapote are islands much smaller than the preceding, not occupied, but cultivable : the other small groups merit no particular notice, and while there is so much good land on the margins of the lake applicable to all purposes, they will scarcely ever be looked at with a view to utility. From

the series of 351 levels taken in 1838 at different stations between the port of San Juan del Sur and the mouth of the river Lajas, in the lake, it results that the surface of this is 128 feet 3 inches above the level of the Pacific at low water; and on reference to the careful observations made in 1830 by Mr. Lloyd and other scientific gentlemen, on the Isthmus of Panama, from which it appears to be satisfactorily ascertained that the Pacific at low water in the Bay of Panama is 6 feet 6 inches lower than the Caribbean Sea at Chagres: also at low water it may be safely assumed that the surface of the Lake of Nicaragua is 121 feet 9 inches above the Caribbean level.

As the lake receives all the drainage water from a wide extent of country, and as the periodical rains, very copious in those parts, commence and terminate with only a few days of difference respectively in each year, it is reasonable to suppose there will be a notable increase and diminution of the water in the wet and dry seasons of the year. For the purpose of ascertaining the proximate quantity of this variation, observations were made for several days in succession during calm weather, at the old fort on the beach near Granada, in May 1839, just previous to the beginning of the rains, when the level had reached the usual minimum: similar observations were repeated in the November following, when they had ceased, and the level had attained its maximum: the difference between these two was 6 feet 6 inches, from which quantity, taking one year with another, it does not vary perhaps many inches. In other respects there are few notable casualties, except occasionally a heavy surf on the western shore, when the wind blows strongly from the north, or north-east; but this causes little inconvenience, unless piraguas be carelessly left in the wash of

it: they are then exposed to damage, and sometimes broken up.

In contemplating the opening of a ship canal in the State of Nicaragua, the river San Juan becomes an object of the highest importance, as seeming to present the natural and available means for effecting that great enterprise: of course it will require many improvements. The resources of science and art must be called upon to remove existing obstacles, as well as to create facilities for putting the navigation thereof into such a state as would be required; still there are no forcible reasons to despair of being able to accomplish such a work. The length of the river, taken through its windings, is about 70 geographical miles: the breadth is various, from 100, in a few places, to 300 and 400 yards, as is also the depth of water, there being every measurement from two to five fathoms; in several parts there are six, seven, and even eight fathoms. The force of the downward current is generally from a mile and a half to two miles per hour, except in the rapids, where there is a great acceleration: also when the river is full, in the rainy season, the impetus of the stream is much augmented. The surface of the lake, as before stated, is 121 feet 9 inches above the level of the Caribbean Sea; this gives to the bed of the river a main descent of 1 foot 9 inches per mile. Numerous islands are scattered along the course of the stream, some of several hundred yards in length, but usually very narrow: they can be scarcely called impediments, because there are passages on either side of them. The present mode of navigating the river is by piraguas, of five to eight tons burthen, with a crew of ten or twelve men besides the patron. These boats pass up and down at all seasons of the year: the return

voyage, being always against the current, is the most dilatory and laborious. As no sails are used, it frequently occupies as many as twelve or fifteen days between the port of San Juan and the lake, whereas the passage from Granada to the port is often made in seven or eight days. In the lake, sails are always used when the wind serves, and frequently might be so in many parts of the river; but this is not customary, chiefly because the crews are not dexterous enough for their management in a narrow channel. The time for making the round voyage is generally estimated at from twenty-five days to a month. The only part that demands more than ordinary care is at the rapids, where great attention is requisite in going down, from the velocity of the stream, and to avoid the rocks projecting from the bed of the river: in ascending, all the strength of the men must be exerted at these places to set the boats up against the stream by means of strong poles, which is sometimes a task of hard labour for several hours, and not always accomplished without previously landing a part of the cargo, which must afterwards be transported on their shoulders to a convenient spot for re-embarkation. There are four rapids, called Machuca, Balas, Castillo viejo, and Toro, all within the space of about 12 miles of river, the longest being that of Machuca, which is less than a mile in length: the intermediate distances are from Machuca to Balas, 2 miles; Balas to Castillo viejo, $3\frac{2}{3}$ miles; Castillo viejo to Toro, 4 miles; all free from embarrassment, and having from three to six fathoms depth of water. Each of these rapids is formed by a transverse elevation of hornblendic rocks, and other primary slate, running north and south, and rising in sharp and broken masses above the water when low, but leaving a channel on

either side sufficient for the passage of the boats: the breadth of the stream at Machucha is about 300 yards, at Castillo viejo little exceeding 100. It will readily be conceived how these cross ridges occasion the water to break against them with great force, and cause a violent rush through the lateral channels; yet experience shews the piraguas can go through them without serious hazard; indeed, there is no remembrance of a fatal accident having occurred in them. These are the impediments which, hitherto vaguely defined, have led to the opinion, generally entertained, that it would not be possible to make the river navigable for ships of large burthen, owing to the cataracts imagined to exist in it: the rapids just mentioned are certainly not cataracts, nor in any way approaching to that character; the removal or alteration of them would undoubtedly demand the employment of great skill and much labour, but there is not sufficient ground to warrant a belief that it could not be exerted effectively, and when the many works of a stupendous nature that have been accomplished by the powers of modern engineering are adverted to, the obstructions here presented will probaby assume an aspect far less formidable than what has been attributed to them.

The San Juan receives a few small streams on either side; and two large ones, the San Carlos and the Serapequi, on the right hand, descending—both come from the interior of the State of Costa Rica, and bring down a considerable body of water: especially the latter, which is navigable for boats more than 30 miles. The Colorado branch of the San Juan, which flows out of it about 10 miles above the port, occasions an immense injury to the main stream in its progress thence to the sea, and has been the cause of great deterioration in the lower part by

gradual deposits of mud and sand, owing to the diminished velocity of the current, whereby the navigation is seriously impeded. The opening of this branch is about 400 yards wide: in the middle of it, when the water is at the lowest there is a depth of nine feet, decreasing to three at each side; but often in the rainy season these depths are more than doubled, as appears from measurements made at two periods—viz., in the beginning of May and the middle of July, which may be taken as being the times of the two extremes, or nearly so. These measurements, which were made by myself, were calculated by the method of equidistant ordinates, give a result of 28,178 cubic yards of water per minute drawn off in the former season, and 85,840 in the latter; a quantity which, adopting the first, would be sufficient to fill a canal of 20,000 yards long, 600 yards broad, and three fathoms deep, supposing the sides of it perpendicular, in a little more than seven hours. It is not likely the Colorado could be made available for a canal communication instead of the lower part of the San Juan; in the first place, because its course is through low level land, which, from the channel not being sufficiently confined to prevent spreading, it frequently inundates to a great extent; and in the next, because there is a very dangerous bar, where it discharges into the sea, without anything like a port, or a locality for forming one.

To render the San Juan serviceable as the line for uniting the two oceans, three different operations will have to be performed: one, closing up the outlet of the Colorado; another, deepening the channel from that outlet down to the port; and the third, clearing away the rocks at the rapids. For the first of these a weir of solid construction seems to be a natural suggestion, in the raising of which nothing of an arduous character would

present itself, being a work so well understood, and of frequent occurrence in all countries. In the distance from the Colorado to the port, 13 or 14 miles, probably reducible to 10 or 11, the river widens considerably, has many shallows, and is besides impeded by a multitude of small islets, or rather hummocks, a foot or so above the surface of the water, mostly covered with coarse grass and herbaceous plants—forming altogether a labyrinth of channels, some passable by piraguas, others not ; the depth varying from four to eight or ten feet : consequently this portion of the river would demand continued labour, rather than extraordinary ingenuity to clear it. These islets, seldom exceeding a score of yards in extent, appear to have been formed by the lodgement of trunks of trees, or other substances brought down by the current ; which, losing much of its velocity at the Colorado, has originated deposits of mud and sand that have gone on accumulating gradually to the great detriment of the channel ; and no means have been employed for preventing the annual increase of the injury. It would therefore be necessary to excavate some millions of cubic yards of mud from the present bed ; but the superficial aspect of the whole space in question does not lead to a supposition that in the course of such a work there would be required other machinery than such as is commonly employed for clearing out and keeping rivers free. The same means would be applicable to other parts where partial deepening might be necessary ; and it is not unlikely that modern practice has contrived, or can contrive, various expedients for this purpose, with the view of economizing labour and expense.

The execution of the third operation would possibly occasion more embarrassment than either of the preceding, and call for the resources of art, as well as the exertion of

talent of a superior grade. If the part of the river comprising the rapids be looked at geologically, it will present the idea that the masses of hornblendic rock, which approach to or rise above the surface of the water, are not aggregations formed by superficial causes. There are indications that seem to authorize a supposition of the bars having been elevated by some internal agency, whose motive force has acted from a distance below the surface of the earth, defying all human research, and has been extended over the space mentioned, with different degrees of violence. This conjecture seems to derive some support from the circumstance of the depth of water between the rapids being found to vary considerably. Works on geology point out such disturbances as having taken place at various periods, and in different regions : attributing them to volcanic energy, which in this country, where so many unequivocal traces of that power exist, will authorize an inference that those in question have been so caused. The idea becomes plausible, at least, from the same kind of formation not being met with in any other part of the river, nor do the banks elsewhere present rocky strata. In further corroboration of this hypothesis may be cited an incident that occurred in 1648, in which year a Spanish brigantine, from Carthagena de las Indias, arrived at Granada : after discharging her cargo and taking another on board, she started on her return voyage, but on proceeding down the river it was found to be so obstructed at a certain point that the passage was impossible ; she was consequently taken back to Granada, the cargo was relanded, and the vessel laid up at a place near by called the Isletas, where after lying some years she was broken up. Protests and documents confirmatory of this fact are still existing in the municipal archives of

the city. There is indeed no record extant of violent earthquake, nor extraordinary volcanic explosion, having happened at that period ; yet the *possibility* of the event just supposed need not be rejected as purely imaginary, in the face of the historical evidences there are of the rising of Monte Nuovo, near Naples, in 1538 ; of Jorullo, in Mexico, in 1759 ; and some more modern instances ; though certainly most of these are known to have been accompanied by earthquakes. In the river Panaloya, which runs out of the Lake of Managua into that of Nicaragua, (about 15 miles from one to the other,) there is another example of a bed of rock, not very compact, nearly a mile in length, being raised up in a similar way as in the San Juan, and to all appearance from a like cause ; but being considerably more elevated, and filling entirely the channel of the river, is quite dry during the greater part of the year ; the water working a way through it in many small rills, except sometimes in the height of the wet season, when it passes over in a thin sheet.

Keeping these circumstances in view, many of the arguments which have been adduced for supposing the impossibility of making the San Juan sufficiently navigable for the purpose contemplated, will appear much weakened, if not entirely set aside. The removal of the rocks from the rapids is certainly the only operation likely to demand extraordinary means, and the employment of first-rate talent ; whether it can be effected or not, is a question that must be left to the intelligence and arbitrament of the many distinguished engineers of Europe. The celebrated men of the Institute of Civil Engineers in England, and those who direct the works of the Board of Ponts et Chaussées in France, are the persons most competent to decide this point ; the great works which have been con-

structed under their respective directions are sufficient to warrant the expectation of success in this or any other great undertaking. The other parts of the river seem not to call for anything beyond the ordinary methods of deepening and improving ; from its great length much labour and cost must undoubtedly be employed, but the object in view is altogether one out of the common class of canal work, and at whatsoever place it may be attempted will require great abilities, various expedients, and vast exertions, to accomplish it. The enquiry therefore is, where can all these be employed with the most promising hopes of a favourable result : the expenditure of a few thousand pounds, more or less, will always be a subject of minor consideration to the selection of the point where the fewest natural impediments are found.

Assuming that the river San Juan could be made navigable, then from the head of it there is a stretch across the Lake of Nicaragua of about 50 miles to the entrance of the river Lajas ; which distance, from the soundings hitherto obtained, can present no difficulty to ships drawing 20 to 22 feet water, except perhaps within a few fathoms from the latter shore. From the junction of the Lajas with the lake, across the isthmus to the port of San Juan del Sur on the Pacific, the space passed over by the line of survey is 28,408 yards ; but could a direct line, or one nearly so, be followed in carrying on the work, it would be only 20,400 yards ; the former, by straightening in a few places, can be reduced by 2,000 yards, or possibly something more. The analytic description of this strip of land, over which it has been supposed the canal could be carried, will give an idea of what obstacles would be met with to piercing the continent in this direction. It may also serve as a basis of comparison between the work that would

have to be done here and at Panama, and may help to elucidate the rival pretensions of the two localities. With the aid of the accompanying table, it will afford some idea of the nature of the ground to practical persons who may be disposed to look over it with attention. The levels were taken at 351 stations; the culminating point on a small flat called the Cumbre de la Palma, a little more than 100 yards across from one deep ravine to another, is 615 feet above the level of the sea, and 487 above that of the lake, the surface of this being 128 feet above the sea.

The river Lajas varies in breadth from 30 to 100 yards, being generally between 50 and 60: from the mouth upwards, to a place called Paso-hondo, a distance of 5,460 yards, the depth of water is from three fathoms decreasing to one; the bottom mud, or earth of little consistency, which in several parts was bored through as far down as 28 feet before reaching hard ground or rock: the least space penetrated was nine feet before getting to firm substance, and there the water was two fathoms. The left bank, going up, is elevated in some places from 20 to 30 feet, in others much less, about 8 or 10, covered, but not very thickly, by trees of a middling size; the opposite side is low, encumbered mostly by a dense growth of wild cane, very long but of small diameter, with a few large trees interspersed among it. If this portion of the river be made to form part of the canal, and there seems to be no reason why it should not, the whole distance to be excavated would then be reduced to about 21,000 yards. Proceeding from the Paso-hondo, but leaving the river which there forms a curve, at the end of a distance of 340 yards, the superficies of the soil is 6·8 feet higher than the surface of the lake; in about 800 yards more

it is 4·2 feet below ; in 1,458 yards more, still more than 4 feet below ; in other 560 yards, 1 foot below ; in this space the highest intermediate point, on a base of 360 yards is only 11 feet above the lake : going onwards 1,252 yards, the extreme point is again 3·8 feet below the lake : in this last distance none of the intermediate points are more than from one to two feet higher than the lake. Thus in a distance of 9,860 yards from the mouth of the Lajas, the surface of the ground is lower in several places than that of the water in the lake, and in no part rising much above it : a circumstance that no doubt would be of great importance to the perfection of the work, as the whole of this length of canal could always be filled from the lake. From the position last named there is no other depression lower than the lake ; in advancing 3,046 yards, with a very gentle ascent, without abrupt eminences of much consideration, the elevation becomes 11 feet above the lake, the greatest excess being 34 feet on a base of 450 yards. A continuation of 1,630 yards, with an ascent equally gentle as the preceding, makes the height 26 feet above the lake ; and a succeeding distance of 2,160 yards raises it to 58 feet, without having in this space a protuberance of much importance. Another draft of 1,400 yards reaches to what may be considered the foot of the Cordillera ; the surface is as unbroken as the last, but the rise more rapid, for here the height of 122 feet is attained : this point is situated at the extremity of a plain in the hacienda of Cebadilla, and at the entrance of the ravine called the Platanar : this position marked as No. 143 on the Plans of Survey, is 18,096 yards from the lake, and 10,312 from the beach of port San Juan del Sur. From No. 143 would commence an arduous portion of the enterprise, for in 1,800 yards the height increases

to 163 feet, and thence far more rapidly in the four following distances ; namely, in 696 yards, to 223 feet ; in 534 yards more, to 315 feet ; again, in 380 yards, to 374 feet ; and in the last 173 yards, to 487 feet : this is the summit level on La Cumbre de la Palma, being 487 feet above the level of the Lake of Nicaragua, and 615 above the Pacific Ocean. As in the last four drafts the ascent has been very violent, in the next two the descent is still more so : for in 905 yards it is 331 feet ; thence, in the 925 yards following, 107 feet more ; and in 4,900 yards down to the beach, the descent is 177 feet.

Through the distance of 18,096 yards, as just stated, to No. 143, the whole of the ground is but little encumbered by trees, and the nature of it is such that any kind of operation may be carried on there without difficulty ; it is now used as pasture ground for cattle, large numbers of which are constantly kept upon it. Limestone and good brick earth are abundant in many places, nor is there a want of timber or other materials for construction. Nearly the same remarks will equally well apply to the land on the other side of the Cordillera, particularly in the space of the 4,900 yards : the loftiest eminences are thickly covered with wood, among which much good timber is to be met with.

In looking at this description of the line of survey, it will be seen that if in some parts it present facilities for this great enterprise, it interposes undeniably in others, some obstacles of a nature so grave as to call for serious meditation in devising means for overcoming them. In reviewing the character of the obstacles here described, the suggestion for surmounting them which most readily occurs to the mind, is, that of a tunnel. In the construction of one, similar to many that have been made in

different countries, for railroads and other purposes, no great difficulties would be opposed. But here there would be a departure from ordinary practice, as the dimensions in height of one to afford a passage for ships, would be a work of such boldness as to demand the mature reflection and study of the most distinguished practical men; nevertheless the experience acquired in recent times in the formation of railroad tunnels and other great works, has so much accustomed engineers to battle with and overcome natural impediments, that in the present day no undertaking, how arduous soever it be, seems to check the progress of art and science combined. In the confidence with which superior talent always inspires its possessors, M. Garella, an eminent French engineer, who has examined and studied the Isthmus of Panama with a view to effecting a junction of the two oceans in that direction, has proposed the bold design, and deeming it practicable, has calculated the cost of the work. The length of a tunnel required there he states at 5,350 metres, equal to 5,831 yards; the height 37 metres, or 121 feet; and the mean breadth 29 metres, or 96 feet nearly. The expense required for this stupendous work he estimates at 35,845,000 francs (£1,493,541); but if an interior walling should be necessary, the amount would then be 4,984,500 francs (£2,077,250). Now, supposing such a work to be possible at Panama, there is no reason to think it impossible in Nicaragua; a locality that apparently offers as many advantages for it, if not more than Panama. These advantages may be specified in the following manner. In the formation of a tunnel, a straight line is obviously the best that can be adopted; therefore, if such a one be drawn from the station numbered 121 on the Nicaragua

Plans, to No. 57, it will be 2,101 yards in length ; but in the survey the chain passed over 2,707 yards between the two points. Were this line chosen, it would cause a reduction from the summit level of 324 feet, placing the surface of the canal at 291 feet above the sea, and 163 feet higher than the lake. Again, by drawing another line from No. 125 to No. 57, the distance will be 2,286 yards ; but as surveyed, it is 3,000 yards. By this the summit level would be diminished 332 feet, making the surface of the canal 283 feet above the sea, and 155 above the lake. Finally, by taking a third line, namely, from the station No. 143 to No. 44, the direct length is 3,833 yards ; or by the chain line, 5,300. By this more advantage would be gained than by the others ; for it would bring the surface of the canal 365 feet below the summit level ; that is to say, making only 250 feet above the sea, and 122 above the lake. It must be noted that the stations 143 and 44 are not on the same level ; the former being 250 feet, and the latter 205 above the sea ; that is, a descent of 45 feet from one to the other, or 1 in 255. It is also probable a further gain would be made were this line prolonged about 150 yards to station 41 ; the descent would then be 73 feet, or 1 in 166 nearly, as 41 is only 177 feet above the sea.

Now by making a comparison between Panama and Nicaragua, and taking the longest line (3,833 yards) for the tunnel at the latter, there will appear a difference in length of 1,997 yards ; and by proportion a difference in cost of 17,080,819 francs, or £711,700 ; that is, under the supposition of the interior walling being necessary ; but from the external character of the rocks, which are generally of limestone, moderately hard at Nicaragua, and a species of porphyry at Panama, the chance of its being

dispensed with is nearly the same at both places. In that case the respective costs of the tunnel would be £1,493,541 and £981,892—a difference of £511,722 in favour of Nicaragua, presuming the details of the work to be alike in both cases. Also, be it granted that the whole line can be shortened 2,000 yards by straightening, and 5,460 yards of the Lajas be made available, then the whole amount of excavation required for the canal will be reduced to about 21,000 yards, tunnel included.

With respect to feeding that part of the canal which could not be filled from the lake, it may be irrelevant to state what are the resources. In the course of the survey the line between the stations 23 and 143 passed through two ravines, distinguished as the Quebrada de la Palma and Quebrada del Platanar, in distance about 7,250 yards. In each there is a small run of water, permanent throughout the year, but increased to rivers during the rainy season: added to these there are numerous rivulets and rills descending through the gorges of the mountains that on either side present convenient positions for forming reservoirs at different elevations, wherein could be collected, at suitable places, not only the products of the perennial streams, but also the copious additions from the periodical rains; from which, taken together, an ample supply for the expenditure of the canal might be calculated upon. Besides these sources, the expedient of sinking Artesian wells at different points on a chain of heights covered with perpetual verdure, could be resorted to, in order to prevent the chance of deficiency. A review of these details will place Nicaragua in a very favourable comparison with Panama, if it do not ensure to it an important superiority.

TABLE of DISTANCES and HEIGHTS.

Distances in Yards.		Height of Land above the Sea, in feet.	Height of Land above the Lake, in feet.
5,460	River Lajas	128·3	..
340		134·8	6·8
800		123·8	4·2 below
1,458		123·8	4·2 „
560		127·	1· „
1,242		124·2	3·8 „
3,046		139·	11·
1,630		154·	26·
2,160		186·	58·
1,400	No. 133	250·	122·
1,800		291·	163·
696		351·	223·
534		443·	315·
380		502·	374·
173	Summit	615·	487·
905		284·	156·
925		177·	47·
4,900		..	128· below
28,409			

If a tunnel be considered an eligible expedient for avoiding the greater part of the height of land, it will be as applicable in the one place as in the other; then the distance to be canalized must be looked to. M. Garella has said this, at Panama, will be $76\frac{1}{2}$ kilometres (83,614 yards): that is, from the Pacific to the river Chagres, $54\frac{3}{4}$ kilometres (59,841 yards); between the Chagres and the Bay of Limon, $12\frac{1}{2}$ kilometres (13,662 yards); and $9\frac{1}{4}$ kilometres (10,110 yards) in the Chagres itself—say $67\frac{1}{4}$ kilometres, (73,504 yards,) not including the river; whereas in Nicaragua the length of canal to be made

would be about 21,000 yards, as previously stated. Before deciding upon the superior eligibility of either place, it will become a subject of examination and dissension whether making the rivers San Juan and Lajas navigable, and cutting the 21,000 yards of canal, can be effected at less cost than the excavating and completing of the 73,504 yards, and the 10,110 yards of the Chagres : it is very probable the latter operation would prove the most expensive. At one extremity of the canal of Nicaragua there would be the port of San Juan in the Atlantic, which presents as many conveniences as would be required : it may be entered at all seasons and in all weathers without risk ; the anchorage is good in four to five fathoms water, nor is there any danger within it ; therefore it could be made one of the termini of the canal without incurring much expense for improvement as a port. At the other extremity there is the port of San Juan del Sur in the Pacific, possessing similar advantages ; at the head of it the beach is low and sandy ; on each side the land juts out towards the sea, forming promontories of 400 to 500 feet high ; the entrance from the sea is clear, and about 1,100 yards across. At 200 yards from the beach at low-water mark, there are two fathoms water, increasing to 10 fathoms, which is the depth at the entrance ; the tides rise from 10 to 14 feet. At the distance of less than a mile from this San Juan, there is another port named Nacascolo, of nearly the same size and figure ; the ground between them being low and nearly level, they might be united by a cut were it thought necessary ; lying so nearly adjacent, they could probably both be usefully occupied—one as an entrance to, the other as an exit from, the canal.

Assuming, as a supposition, that although the San Juan should be rendered navigable for ships of 1,200 tons

burthen; that the construction of the tunnel should not be thought an advisable project; also that the ascent of 615 feet above the sea, or 487 above the lake, by means of locks, should present insuperable obstacles: still, even in this extreme case, Nicaragua is not deprived of pretensions to have the canal pass through its territory: this assertion may be concisely explained in the following manner. The Lake of Managua communicates with that of Nicaragua by the river Panaloya, or 'Tipitapa as it is sometimes called, which is about 16 miles in length; in twelve of these it runs through a flat country, and may be considered almost on a dead level with the Lake of Nicaragua; in the remaining four miles there is a rise of 28 feet to the surface of Managua. This river has been surveyed: in all parts it has much more than sufficient breadth for the canal, with a depth of one, two, and three fathoms water, most generally the two latter, all along the twelve miles; thence commences the rise of 28 feet, all of which is within the four miles, but thirteen feet of it is a perpendicular fall occasioned by a bar of rock that crosses the river about a mile and a half from the Lake of Managua. In that lake there is apparently the same depth of water as in the other of Nicaragua, and forms the Panaloya to the further extremity of it; the length is 38 miles, little more or less; thence in a direct line to the port of Realijo, the distance is not much more than 33 miles. The elevation of the surface of Managua is 156 feet ($128 + 38$) above the ocean. Here then a cut through the land would unite the Atlantic to the Pacific as easily, not to say more so, than at any other point. This line, either direct or nearly so, would run through a country lying between two ridges of heights separated by a space of several leagues in breadth; nor is there any considerable un-

dulation of the land, so that the whole distance may be taken to be a gradual descent from the lake to Realejo. As this ground has not yet been surveyed, there are not sufficient data to analyze it with confidence ; at present it can be looked on only as a possibility that may be compared with other routes : but an idea thus thrown out as a reasoning deduced from observations of the local peculiarities made in travelling over the ground, may not be altogether unworthy of further examination. It would be for the interest of the State of Nicaragua, were the Government to expend a few thousand dollars in employing competent persons to survey this tract, and take the levels accurately. A topographical plan of it, added to those of Panama, Tehuantepeque, and that already made of Nicaragua, would furnish altogether a body of evidence leaving little more to be desired for deciding a question so momentous as that of fixing upon the most suitable location for executing this magnificent enterprise.

Whensoever or wheresoever it may be achieved, the benefits that will accrue to the country from this canal are easily to be computed. It will raise to a high value leagues upon leagues of land now of little estimation. It will create a population where now there is none, promote industry, extend agriculture, attract commerce, with all the useful arts, and give a wide spread to civilization. It will be the means of calling villages and towns into existence, and of changing uncultivated wilds into the realities of profitable labour and progressive prosperity. For these reasons it is a prize well worthy of being contended for, and it ought to inspire each Government with an ardent zeal in manifesting all the claims its territory can produce, for obtaining the preference to a favour so inestimable.

THE STATE OF COSTA RICA.

This is the south-easterly division of the Republic, bounded on the north-west by the territory of Nicaragua ; on the north by the river San Juan ; on the east by the Caribbean Sea, and the State of Veragua belonging to the Republic of New Granada ; and on the south-east by the Pacific Ocean. In superficial extent this State is more than three times the size of Salvador, but not equal to the half of Guatemala ; being 1,775 square geographical leagues, or thereabout. Internally it is divided into three departments : the eastern, the western, and that of Nicoya. These are again subdivided into partidos, or districts, in the following manner ; the eastern contains the partidos of Cartago, Ujarras, Terrabá, San José, and Escasu ; the western those of Herredia, Alajuela, and Esparza. Nicoya only two, those of Nicoya and Bagases. About six-sevenths of the whole population of the State is located on a line running westerly from the city of Cartago to Punta Arenas in the Gulf of Nicoya, the other parts of the territory being almost a wilderness. The towns and villages are so few in number that a short list will comprise the whole of them. In the partido of Cartago there are the city of that name, with the towns or villages of Cot, Quircot, Tobosi, and La Union ; the aggregate population of which amounts to 18,495. The partido of San José has the city of San José, with the towns of Curridabat and Aserri, containing together 24,432 inhabitants ; hence it appears that nearly one half of the people of the State is concentrated in these two partidos. Ujarras has the town Paraiso, or Ujarras ; the villages Orosi, Tucurrique, with the two valleys Turialba and Matina : in all 3,907

inhabitants. The partido of Terrabá, lying near the Pacific coast, far remote from the others, is poor and insignificant : Terrabá and Boruca, its two villages, having only 1,527 inhabitants. Escasú has the town of the same name, and the village of Pacaca, with 4,907 inhabitants. The partido of Heredia has a population of 18,390 in the city of Heredia, with its vicinity, and the town of Barba. The partido of Alajuela contains the city of Alajuela, the towns or villages of Esparza, Atenas, and the port of Punta Arenas, with 15,540 inhabitants in the whole. The partido of Nicoya, including the towns of Nicoya, Guanacaste, and Santa Cruz, numbers 6,900 inhabitants ; and lastly, the partido of Bagases has two towns, Bagases and Cañas, with 1,200 inhabitants both together. The entire population of the State thus amounts to 95,300, which, if referred to the whole extent of territory, could place no more than 53 individuals upon each square league ; but assigning it to the portion of country that is usefully occupied, which cannot be estimated at much more than about seventy square leagues, there will be 1,168 individuals to each—a proportion greatly exceeding that of either of the other States taken in a similar point of view.

The general face of the country is extremely irregular, and intersected by ridges of mountains ; the primary range of the isthmus passing through it diagonally, and, throwing off many spurs on either side, gives to the superficies a continued alternation of abrupt heights and sudden depressions. On the main range there are many lofty eminences, or volcanoes now quiet, if not extinct ; the most elevated of these are Orosi, about 5,200 feet ; Votos, 9,840 ; and the mountain of Cartago, 11,480 : this bears correct indications of having been active at some unknown period ; it has a crater on the summit of more than a mile in

circumference, and of very great, but uncertain depth. In clear weather both oceans can be distinctly seen from this lofty position, which is presumed to be the only point on the American continent, indeed in the world, where the eye can take them in at one view.

In all parts of the State, only excepting the very coasts, the climate is temperate and agreeable, rarely subject to other vicissitudes than those from the rainy to the dry season ; great heats or sharp colds being never experienced. It is therefore very favourable to all the purposes of agriculture, and suitable to the introduction of many of the productions of Europe, as well as to most of those peculiar to tropical regions. The soil is abundantly fertile, particularly on the table lands and in the valleys between the mountains, which are well watered by numerous streams, generally not very large ones : some few there are of greater volume ; but from the mountainous character of the country, neither of these is much calculated to assist traffic in the way of inland navigation, especially as during the wet season they become violent torrents. The two ports of entry now established are well situated for external commerce ; that of Punta Arenas in the Gulf of Nicoya, on the Pacific side, is the best ; it is in all respects sufficiently good, tolerably well sheltered, and capable of receiving vessels of moderate burthen ; those, however, of large size, must anchor at about two miles from the landing-place—a distance somewhat troublesome in disembarking and receiving cargo. Matina, on the Caribbean Sea, is not so good as the other, but useful in affording direct access from the West India Islands, the United States, and Europe ; it is therefore frequented by small vessels. The city of San José, now the residence of the State Authorities, and almost in the centre of the productive district, is

nearly midway between the two ports, but a little nearer to Matina than Punta Arenas ; and though the distance to either is not much above 25 leagues, the transport of merchandise is exposed to delay and inconvenience from the nature of the roads, that from Matina being very bad. Increasing prosperity has naturally called attention to the means of removing some of these difficulties, and in recent years efforts have been made, with some success, to obtain a more easy transit in both directions, but greater ones are still required to bring the roads into fair order. Between the capital and Punta Arenas, which is the route of most importance, a good deal of labour has been usefully employed ; bridges have been constructed over some of the streams of difficult and dangerous passage, and the road is now so much amended as to admit of produce being conveyed down to the port in the usual wheel-carriages of the country, in about five days. To have obtained this convenience is a proof of progress of no small consequence ; it does credit to the care of the Government, perhaps more to the energies of proprietors and the people, who feeling the many hardships they encountered in transporting the fruits of their industry, cheerfully set about getting rid of some, if not the whole of them ; the first amendment in the social condition of an unskilled people is always more arduous than successive improvement, but that once accomplished it rarely fails of leading to others of much greater benefit. From San José to the river Sarapequi, where it becomes navigable for boats, (into the San Juan,) there is a distance of perhaps less than 20 leagues which it is said could be opened and made a moderately good road, with less labour and expense than would be required for making that from San José to Matina easily transitable. If this project were carried out,

it would undoubtedly open a very useful communication with the port of San Juan de Nicaragua, or Grey Town, through which the greater part of the produce of the State could be directed to Europe, without the necessity of rounding Cape Horn; thereby reducing the freight upon its principal export, coffee, to about one half. This would certainly be an advantage of great moment.

The natural disposition of the labouring population of this State is in many respects worthy of praise; for if not distinguished by a greater share of intelligence than their fellow-subjects in the others, or by acquirements in the useful arts likely to raise them above the grade of cultivators of the soil, they are most certainly entitled to approbation for being quiet, industrious, patient of the hardships inseparable from their class, submissive to their rulers, and therefore easily governed. Placed at one extremity of Central America, separated from the nearest adjoining State by an extensive tract of country, unpeopled and in all the beautiful wildness of nature, they have enjoyed the advantage of being almost strangers to the political dissensions which have agitated and ravaged other portions of the country. It would not be correct to say they have wholly escaped convulsion, for occasionally the evil influence of self-appointed regenerators and pretended political theorists has interfered with their quiet, producing innovations and some disorder, but far less frequently, and without causing so many deplorable results, or so much demoralization, as elsewhere. The comparative poverty of the people for many years presented fewer temptations to the cupidity of turbulent and needy men; and while the rest of Central America was a prey to factious revolutions, Costa Rica was allowed to remain in that almost perfect tranquillity which was instrumental in

preparing the way to the favourable condition it may at present be justly proud of.

The wealth of Costa Rica is coffee ; the other agricultural productions besides maize, frixoles, and the usual articles of food, are tobacco, sugar, and a little wheat : the latter not being consumed by the commonalty, is not much attended to. The natural products, and those requiring but little management, are cattle, Brazil wood in abundance, with other woods, as mahogany, cedar, &c. There are some mines of gold, silver, copper, and possibly other metals, the working of which has not become an object of speculation, excepting the veins and deposits of gold, which have yielded some profit. On the sea coast about Nicoya some pearls are obtained, also mother-o'-pearl shells, large quantities of which have been disposed of to foreign traders. The entire list of exportable commodities is limited to about eight different articles ; of these coffee alone gives four-fifths of the aggregate value : none of the coarse woollens, (jerga,) used by the poor for clothing, are manufactured here ; they are brought from Guatemala and Salvador.

At a former period no portion of the vast American dominions belonging to the Crown of Spain was supposed to be so miserable and profitless as Costa Rica. So recently as forty years since, when Juarros wrote his "History of the Kingdom of Guatemala," he represented it as a district so impoverished and insignificant that he thought the name must have been given to it ironically, in contempt of the few paltry resources it possessed. For several years after the Independence no improvement, or but very little, took place. That event opening the ports to foreign commerce, it was resorted to by European vessels to take away Brazil wood in exchange for manu-

factured goods, as there was nothing else to offer them. This certainly was of some benefit to the State, and gave a movement to industry, which until then was of no value, from the want of customers. This continued to be the principal branch of commerce until 1829 or 1830, when an idea was suggested, which being followed out, has produced an important change in the social condition of the community, and exemplified by the clearest of all possible demonstrations, successful results, the great advantage that can be derived from introducing into a country, or even a district, new branches of agricultural industry. The State was then indigent of almost everything beyond a bare subsistence wherewith to supply the wants of a small population. It has now become flourishing, is enjoying a gradual increase of prosperity, is well furnished with every necessary and many of the foreign luxuries of life, and has created for itself an exportable article of value, annually increasing in quantity, which places it on a footing of equality, or nearly so, with the most industrious of the other States. But if the comparative extent of land under cultivation, and the smallness of the population be considered, it unquestionably stands higher on the scale of agricultural wealth than any one of its neighbours. The bounds to this improvement may be looked upon as indefinite, or to be limited only by the number of hands the population will be able to furnish for labour.

This transition from poverty to affluence has been brought about by the growing of coffee. About the time just mentioned the experiment of making a small plantation was tried; it succeeded so well as to inspire great hopes of future profit, and, what was still better, proved a stimulus to other persons to follow the example thus

given. Two or three years were sufficient to shew that both soil and climate were admirably congenial to the plant, when the first adventurers had the satisfaction of seeing their expectations would be fully realized; increased diligence, the natural consequence of a fortunate speculation, soon extended the number and size of the plantations, and a moderate quantity for exportation was gathered: this quantity has annually gone on augmenting so much, that in 1845 3,500 tons were shipped for foreign markets, and it was estimated that the disposable produce of 1846 would be very little, if anything, short of 5,000 tons.

This may be fairly termed a rapid progress, and the good effect of it has been proportionate. Commerce and active industry have banished apathy and despairing indifference. Foreigners have been attracted thither, and the population already shews a slight increase. Some useful arts have been introduced, employment given to the working classes, and by the easier means of living thus diffused, civilization has been advanced. A revenue for the State has been created, and in fact the foundation laid for a prosperity that may be pushed forward to an extent not definable at present.

The quality of the Costa Rica coffee is recognised as excellent. In order to place it in its corresponding degree of estimation in foreign markets, some proprietors of plantations have not omitted getting it chemically analyzed in Europe; the result of which examination has classed it in the third degree among those kinds generally esteemed as the best: this will always ensure a demand for it, and how great soever may be the quantity raised, there will be no fear of its not being readily taken off.

In proof of the prosperous condition of Costa Rica, the following Returns of Exports and Imports for the year 1845, derived from an authentic source, will be undeniable :—

<i>Exports.</i>		Dollars per Quintal.	Dollars.
Coffee	70,000 quintals,*	at $7\frac{1}{4}$	507,500
Chancaca (rough Sugar)	8,000 „	at $2\frac{1}{2}$	20,000
Hides	6,000 „	at 1	6,000
Horns		Value	2,000
Sarsaparilla	400 quintals,	at 8	3,200
Mother-o'-Pearl Shells .	12,000 „	at $\frac{1}{2}$	6,000
Brazil Wood	10,000 „	at 1	10,000
Mahogany and Cedar		Value	2,000
Gold Bullion		„	25,000
Tobacco	2,000 „	at 25	50,000
TOTAL . . .			<u>631,700</u>

<i>Imports.</i>		Dollars.
Foreign Manufactured Goods and Effects, by the port of Punta Arenas	Value	300,000
Idem Idem Idem, by Matina	„	80,000
Native Woollen and Cotton Cloths, from Guatemala	„	40,000
Native Cottons, from Salvador	„	20,000
Native Cottons, and Mules from Nicaragua	„	8,000
Ystepeque Tobacco, from Salvador, 400 quintals, at $37\frac{1}{2}$ per quintal	„	15,000
TOTAL . . .		<u>463,000</u>

* 1848.—150,000. Page 8, "Sketch of Republic of Costa Rica," by F. M.

Net Revenue of the Government.

	Dollars.
Customs at Punta Arenas	40,000
Customs at Matina	8,000
Duty on Tobacco	40,000
Duty on Spirits, and Licences	30,000
Stamped Paper	4,000
Alcabala, Interior	10,000
TOTAL . . .	132,000

Guatemala formed itself, by Decree, March 21, 1847, into a constituted Republic, and in its new character a treaty of friendship and commerce has already been made with Great Britain, as also with France and other powers, upon the basis of mutual good understanding, with equality of benefits to the subjects of each: this is certainly a judicious step, and bids fair to be conducive to the interests of the new Republic. There is also a disposition shewing itself, to encourage immigration, by granting lands upon favourable terms to industrious foreigners from all countries, who may wish to become settlers and denizens in the territory. Such a measure, adopted in a liberal spirit, would in a few years add greatly to the strength of the nation, by augmenting the population much more speedily than by the natural increase; improvement may be expected to advance with rapid strides by the introduction of new arts: agriculture, brought within the influence of systems approved of and found beneficial in other regions, aided at the same time by the numerous powerful implements employed in other parts, but as yet unknown in these, would flourish to a

degree almost incalculable under a general benignity of climate and regularity of seasons. By a progressive amendment of this kind, no long period would elapse before the roads to the ports, one on the Atlantic and another on the Pacific, would be put in a condition for conveying, at a reasonable and bearable expense, exportable produce from the interior to points of embarkation ; simultaneously, the internal communication would become sufficiently amended to admit of quick, cheap, and convenient transit ; and, with a view to accelerate progress in this direction, the Government has already in contemplation the erection of a chain pier, or some other convenient construction at Ystapa, in order to give greater facilities for commerce by the Pacific, which, when completed, will leave little to desire on that side.

The European cultivator who may form a determination to leave his native soil in the expectation of bettering his circumstances in a distant region by the exertion of his physical powers and acquired knowledge, could scarcely select one more suitable to his wishes than this, where he would find lands fit for the growth of many, if not most of the productions of the temperate zones, besides nearly all those peculiar to the tropics.

Some casual observers have affirmed that European constitutions are incapable of enduring the lassitude of field labour in tropical regions ; if this affirmation be in any degree correct, it is perhaps more applicable to the islands than to the *terra firma* at a short distance from the sea coast ; but over a large extent of territory, where the mean temperature of the year differs very little from 68 degrees of Fahrenheit's thermometer, such an objection can scarcely be deemed tenable ; and it has been seen that among the few Europeans of the laborious classes

who have settled in different parts of Central America, there are examples, both of artizans and others, contradictory of the supposition. Men who lead sober and regular lives can do very well, and bear such a degree of labour as working men are generally forced to undergo in every country, without suffering deterioration of constitutional or bodily powers ; but certainly the case is otherwise with those addicted to the immoderate use of ardent spirits, which, unfortunately, are here both cheap and of bad quality ; for these persons destroy their energies, reduce their stamina, and render themselves unable to perform the obligations of their grade in society, much more speedily by their vices than could be done by exposure to the effects of labour, or inconveniences of climate in any part of the world.

In recent years much has been said as well as written of the great fertility and salubrious temperature of Texas ; it has also received great encomiums for its suitableness to colonization and all agricultural purposes. Hence many thousands have flocked thither from all parts of Europe, as well as from the northern parts of the United States, who, in going to it, must have placed their main dependence upon manual labour, with continued exertion for acquiring a future competence, in a country the greater part of which is yet to be reclaimed from the condition of a natural wilderness. Now the southern parts of Texas, those to which emigrants have principally resorted, though not absolutely within the tropic of Cancer, are yet removed therefrom only about two degrees of latitude, consequently must, in many cases, be endued with some, even most of the peculiarities of a tropical region ; still, nothing is as yet brought forward in the way of shewing that the climate enfeebles the constitutions of Europeans, or im-

pedes exposure to the assiduous toil necessary to the proper cultivation of the land. In the Republic of Guatemala there are many hundreds of thousands of acres of soil, in no single point inferior to the best of Texas, not belonging to individuals, and at the disposal of Government, which would offer as many advantages to the hard-working cultivator as any in that country does, or indeed any other, not excepting Australia or the southern part of Africa. Honduras, Nicaragua, and Costa Rica possess each a similar surplus; but in Salvador, from its limited extent, compared with the others, the proportion is not so great; but it also has plenty of room for colonists.

At the present time all the States, after long experience of the disasters and desolating effects of the civil discords which have afflicted the country generally, evince an inclination of turning their attention, with a good will, to the arts of peace and progress, and to seek in them the means of repairing the misfortunes which inexperience in government, and other mischievous causes now clearly perceptible, have brought upon them. This will be an advance in a right direction, and if properly followed up, will lead to the attainment of their wishes, and gradually place them in an enviable degree of prosperity. Guatemala and Costa Rica are now shewing symptoms of a tendency towards the encouragement of immigration, and should the proper measures be adopted by them for promoting an object so useful, there is every reason to suppose the other States will not hesitate in following the example: by doing this a wide field will be laid open to profitable labour, that with time will become highly productive, both to those who grant and those who receive the favour.

It has been asserted by a modern writer of eminent character, (Maclaren, article "America," in the Encyclo-

poedia Britannica,) that there are in America upwards of four millions of square miles of useful soil, each capable of supporting 200 persons; and nearly six millions, each competent to maintain 490 individuals. Admitting this estimate to be made with proximate accuracy, we may derive from it a pretty confident belief that were the natural resources of the Republic of Guatemala to be unfolded to the extent of their capabilities, it alone would be made to maintain almost fifteen times the number of its present inhabitants, without being more densely peopled than some of the countries of Europe now are. This can be demonstrated by a short calculation: the whole territory contains about 4,420 square geographical leagues, in round numbers, or 39,780 square geographical miles. Now supposing the power of the land to be at the lowest rate given, or 200, it would support 7,956,000 persons; if the power be taken at 490, then 19,492,200—that is, about twenty times the number now existing upon it; if taken at a medium between the two, or 345, then would it sustain 13,724,000, or about fifteen times the present population. Here then is an ample scope for rural operations, where thousands upon thousands of families, if once radicated on the soil, might in a short time, perhaps even in a year or two, lay the foundation of a comfortable and liberal subsistence during the rest of their lives, and prepare a handsome inheritance for their posterity.

COCHINEAL.

NOTE.—This insect was introduced into Guatemala by the Captain-General Don Jose de Bustamente, in 1811, when he was translated from Oaxaca to the command in Guatemala. Tradition says that it was originally found near Panajachel, in the district of Solala, and from thence carried by the friars of the order of San Francisco to Oaxaca; however, Bustamente was the first to promote its cultivation in Guatemala. The climate best adapted for its progress was found to be in the Old City, and Nopals were formed amongst the ruins of the different convents; and until the year 1822 what little was produced was used in the country, or shipped to Cadiz. On the opening of the trade, after the Independence of the country, it was carried to Belize by the traders, and hence brought to England, under the name of Honduras Cochineal, which it bears to this day. The demand gave great encouragement to its production, and in 1827 as much as 100 seroons of 150 lbs. each were exported; in 1830 the export exceeded 300; in 1831 upwards of 700; and a gradual increase has gone on to the present year, 1849, which has been 9,794 seroons; all of which have gone to England, except of this 160 seroons, exported to China direct from Acajutla.

Prices of this article, including the production of Mexican and Teneriffe, have varied much during the last twenty years; the highest price during this period being 10*s.* 6*d.* per lb., in 1833, and the lowest price 3*s.*, in 1842. The highest and lowest prices in 1849 have been 3*s.* 4*d.* to 4*s.* 9*d.* for silvers, and 3*s.* 6*d.* to 5*s.* 8*d.* for blacks.

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